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# **COLLEGE OF THE HOLY CROSS**

A College of Arts and Sciences

Worcester, Massachusetts



## **CATALOGUE**

With Announcements for 1960-1961

Published, February 1960

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# Academic Calendar

SEPTEMBER 1960 — JUNE 1961

## FALL TERM

Sept.	14	Wednesday	Registration for Freshmen.
Sept.	15	Thursday	Registration for Sophomores.
Sept.	16	Friday	Registration for Juniors and Seniors.
Sept.	19	Monday	Classes begin. Mass of the Holy Spirit. Religion Motivation Week begins.
Oct.	12	Wednesday	Columbus Day, a holiday.
Nov.	1	Tuesday	Feast of All Saints, a holiday.
Nov.	14	Monday	Mid-Semester Survey Week.
Nov.	23	Wednesday	Natural Theology Examination.
Nov.	28	Monday	Thanksgiving recess begins at 10:30 A.M. Classes resumed.
Dec.	8	Thursday	Counseling Period.
Dec.	16	Friday	Feast of the Immaculate Conception, a holiday
Jan.	2	Monday	Christmas recess begins after last class.
Jan.	16	Monday	Classes resumed. Term Examinations begin.

## SPRING TERM

Jan.	30	Monday	Second Semester begins. Announcement of Prize Essays.
Feb.	15	Wednesday	Ash Wednesday.
Feb.	22	Wednesday	Washington's Birthday, a holiday.
Mar.	20	Monday	Mid-Semester Survey Week.
Mar.	26-29	Sun.-Wed.	College Retreat.
Mar.	30	Thursday	Easter Recess begins.
Apr.	10	Monday	Classes resumed. Counseling Period.
Apr.	19	Wednesday	Patriot's Day, a holiday.
May	11	Thursday	Ascension Thursday, a holiday.
May	19	Friday	Senior-Junior Term Examinations begin.
May	22	Monday	Sophomore-Freshman Term Examinations begin.
May	30	Tuesday	Memorial Day, a holiday.
May	31	Wednesday	Examinations resumed.
June	10	Saturday	Alumni Day.
June	13	Tuesday	Baccalaureate Exercises.
June	14	Wednesday	Commencement Day.

# SEPTEMBER 1960

SUN	MON	TUE	WED	THU	FRI	SAT
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

# OCTOBER 1960

SUN	MON	TUE	WED	THU	FRI	SAT
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

# NOVEMBER 1960

SUN	MON	TUE	WED	THU	FRI	SAT
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

# DECEMBER 1960

SUN	MON	TUE	WED	THU	FRI	SAT
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

# JANUARY 1961

SUN	MON	TUE	WED	THU	FRI	SAT
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

# FEBRUARY 1961

SUN	MON	TUE	WED	THU	FRI	SAT
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28				

# MARCH 1961

SUN	MON	TUE	WED	THU	FRI	SAT
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

# APRIL 1961

SUN	MON	TUE	WED	THU	FRI	SAT
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

# MAY 1961

SUN	MON	TUE	WED	THU	FRI	SAT
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

# JUNE 1961

SUN	MON	TUE	WED	THU	FRI	SAT
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

# JULY 1961

SUN	MON	TUE	WED	THU	FRI	SAT
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

# AUGUST 1961

SUN	MON	TUE	WED	THU	FRI	SAT
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

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Rev. Owen P. McKenna, S.J. <i>Associate Professor of History</i>	Alumni Hall
Rev. George J. McKeon, S.J. <i>Instructor of Psychology</i>	Wheeler Hall
George F. McLaughlin, B.S., LL.B. <i>Instructor in Economics</i>	Bancroft Hotel
Robert F. McNerney, Jr., Ph.D. <i>Associate Professor of Spanish</i>	193 Whitmarsh Avenue
Rev. J. Gerard Mears, S.J. <i>Professor of Fine Arts</i>	Fenwick Hall
Frederick S. Mirliani, M.A. <i>Associate Professor of Music</i>	13 Winter Street, Auburn
Rev. David J. Moran, S.J. <i>Professor of Ethics</i>	Beaven Hall
Rev. Joseph E. Mullen, S.J. <i>Dean of Freshmen and Sophomores</i>	Fenwick Hall
James H. Nestor, M.A. <i>Professor of Mathematics</i>	941 Main Street
John D. O'Connell, M.B.A. <i>Assistant Professor of Accounting</i>	16 Geneva Street
Rev. Leo A. O'Connor, S.J. <i>Professor of Theology</i>	O'Kane Hall
Joseph F. O'Sullivan, Lt., USN <i>Instructor in Naval Science</i>	16 Florence Street
Edward Peragallo, Ph.D., C.P.A. <i>Professor of Accounting and Economics</i> <i>Chairman of the Department of Accounting and Economics</i>	58 Elm Street
Ramiro P. Planas, S.J. <i>Instructor in Spanish</i>	Fenwick Hall
Walter J. Powers, M.A. <i>Instructor in Economics</i>	33 Richmond Avenue
John P. Reardon, M.Ed. <i>Instructor in Fine Arts</i>	26 Briarcliff Lane, Holden

Rev. Maurice F. Reidy, S.J. <i>Associate Professor of History</i>	Wheeler Hall
Rev. J. Joseph Ryan, S.J. <i>Assistant Professor of Education</i> <i>Chairman of the Department of Education</i> <i>Director of Teacher Training</i>	Fenwick Hall
Rev. Martin E. Ryan, S.J. <i>Assistant Professor of English</i>	Wheeler Hall
Hugo F. Saluti, M.A. <i>Instructor in Economics</i>	28 Trowbridge Road
Fedor R. Salva, Lt., USN <i>Instructor of Naval Science</i>	29 Alpine Street, Millbury
Rev. John J. Sampey, S.J. <i>Professor of Latin</i>	Carlin Hall
Rev. Francis B. Sarjeant, S.J. <i>Professor of Ethics</i>	Fenwick Hall
Rev. Joseph S. Scannell, S.J. <i>Assistant Professor of English and Fine Arts</i>	Alumni Hall
Robert N. Scola, B.S. LL.B. <i>Assistant Professor of Business Law</i>	69 Amherst Street
Patrick Shanahan, Ph.D. <i>Assistant Professor of Mathematics</i>	184 College Street
Rev. Thomas A. Shanahan, S.J. <i>Professor of English</i>	Carlin Hall
Rev. Joseph J. Shea, S.J. <i>Professor of Philosophy</i>	Hanselman Hall
Rev. Laurence R. Skelly, S.J. <i>Instructor in English and Fine Arts</i>	Wheeler Hall
Reginald J. Smith, M.Ed. <i>Associate Professor of Accounting</i>	639 Pleasant Street, Paxton
Rev. Thomas J. Smith, S.J. <i>Professor of Physics</i> <i>Chairman of the Department of Physics</i>	Fenwick Hall
Francis J. Steckbeck, Lieut., USN <i>Instructor in Naval Science</i>	Barnes Road, W. Berlin

Richard M. Stevens, S.J. <i>Instructor in Philosophy</i>	O'Kane Hall
Rev. John R. Sullivan, S.J. <i>Associate Professor of Theology</i>	Hanselman Hall
Rev. Russell M. Sullivan, S.J. <i>Professor of Theology, Emeritus</i>	Fenwick Hall
Rev. Raymond J. Swords, S.J. <i>Associate Professor of Mathematics</i> <i>Chairman of the Department of Mathematics</i>	Lehy Hall
James J. Tansey, M.A. <i>Associate Professor of Chemistry</i>	Box 98, Main St., Charlton
Andrew P. VanHook, Ph.D. <i>Professor of Chemistry</i>	Henshaw Street, Leicester
Edward F. Wall, Jr., M.A. <i>Instructor in History</i>	6 St. Elmo Road
Rev. Thomas J. Walsh, S.J. <i>Associate Professor of Theology</i>	Fenwick Hall
Prentis K. Will, Capt., USN <i>Professor of Naval Science</i> <i>Commanding Officer of NROTC Unit</i>	97 Highland Street, Holden

One Hundred and Seventeenth Year

College of the Holy Cross

Worcester 10, Mass.

*Conducted by the Fathers of the Society of Jesus*

Founded in 1843

## **Act of Incorporation**

An act of the Legislature of Massachusetts, date March 24, 1865, reads as follows:

### **COMMONWEALTH OF MASSACHUSETTS**

IN THE YEAR ONE THOUSAND EIGHT HUNDRED AND SIXTY-FIVE

#### **AN ACT**

to incorporate the Trustees of the College of the Holy Cross

*Be it enacted by the Senate and House of Representatives in General Court assembled  
and by the authority of the same, as follows:*

SECTION 1. James Clarke, Charles Fulmer, James C. Moore, Charles F. Kelly, Livy Vigilante, their associates and successors, are hereby constituted a body corporate by the name of the Trustees of the College of the Holy Cross, in the city of Worcester, and they and their successors and such as shall be duly elected members of such corporation, shall be and remain a body corporate by that name forever; and for the orderly conducting of the business of said corporation, the said trustees shall have power and authority, from time to time, as occasion may require, to elect a President, Vice-President, Secretary, Treasurer, and such other officers of said corporation as may be found necessary, and to declare the duties and tenures of their respective offices, and also to remove any trustee from the corporation when in their judgement he shall be rendered incapable, by age or otherwise, of discharging the duties of his office, or shall neglect or refuse to perform the same, and also from time to time to elect new members of said corporation;



provided that the number of members shall never be less than five nor more than eleven.

SECTION 2. The said corporation shall have full power and authority to determine at what times and places their meetings shall be holden, and the manner of notifying the trustees to convene such meetings, and also from time to time to elect a President of said College, and such professors, tutors, instructors and other officers of the said College, as they shall judge most for the interest thereof, and to determine the duties, salaries, emoluments, responsibilities and tenures of their several offices; and the said corporation is further empowered to purchase or erect and keep in repair such houses and other buildings as it shall judge necessary for said College, and to confer such degrees as are conferred by any college in this Commonwealth, except medical degrees; provided nevertheless, that no corporate business shall be transacted at any meeting unless a majority of the trustees are present.

SECTION 3. Said corporation may have a common seal which it may alter or renew at pleasure, and all deeds sealed with the seal of said corporation and signed by its order, shall, when made in the corporate name, be considered in law as the deeds of said corporation, and said corporation may sue and be sued in all actions, real, personal, or mixed, and may prosecute the same to final judgment and execution, by the name of the Trustees of the College of the Holy Cross; and said corporation shall be capable of taking and holding, in fee simple or any less estate, by gift, grant, bequest, devise or otherwise, any lands, tenements, or other estate real or personal, to an amount not exceeding three hundred thousand dollars.

SECTION 4. The clear rents and profits of all the estate, real and personal, of which the said corporation shall be seized and possessed, shall be appropriated to the endowment of said College, in such manner as shall best promote virtue, piety, and learning in such of the languages and of the liberal and useful arts and sciences as shall be recommended from time to time by the said corporation, conforming, however, to the will of any donor or donors in the application of any estate which may be given, devised, or bequeathed, for any particular object connected with the College; and no misnomer of the said corporation shall defeat or annul any donation, gift, grant, devise or bequest, to or from the said corporation.

SECTION 5. The Legislature of this Commonwealth may alter, limit, restrain, or annul, any of the powers, vested by this act in the said corporation, as shall be deemed necessary, and more especially may appoint overseers, or visitors of the said College, with all necessary powers for the better aid, preservation and government thereof.

SECTION 6. The granting of this Charter shall never be considered as any pledge on the part of the Commonwealth that pecuniary aid shall hereafter be granted to the College.

House of Representatives, March 21, 1865.

Passed to be enacted, Alex. H. Bullock, Speaker.

In Senate, March 23, 1865.

Passed to be enacted, I. E. Field, President.

March 24, 1865.

Approved.

John A. Andrew,  
Governor

ACT OF INCORPORATION

(Chapter 149.)

THE COMMONWEALTH OF MASSACHUSETTS

IN THE YEAR ONE THOUSAND NINE HUNDRED AND TWENTY-SEVEN

AN ACT

Authorizing the Trustees of the College of the Holy Cross to hold  
Additional Real and Personal Estate.

*Be it enacted by the Senate and House of Representatives in General Court assembled  
and by the authority of the same, as follows:*

Section three of chapter ninety-nine of the acts of eighteen hundred and sixty-five is hereby amended by striking out, in the twelfth and thirteenth lines, the words, "to an amount not exceeding three hundred thousand dollars,"—so as to read as follows:—

SECTION 3. Said corporation may have a common seal, which it may alter or renew at pleasure, and all deeds sealed with the seal of said corporation, and signed by its order, shall, when made in the corporate name, be considered in law as the deeds of said corporation; and said corporation may sue and be sued in all actions, real, personal or mixed, and may prosecute the same to final judgement and execution by the name of the Trustees of the College of the Holy Cross; and said corporation shall be capable of taking and holding in fee simple or any less estate, by gift, grant, bequest, devise, or otherwise, any lands, tenements, or other estate, real or personal.

House of Representatives, March 16, 1927

Passed to be enacted, John C. Hull, Speaker.

In Senate, March 17, 1927

Passed to be enacted, Wellington Wells, President.

March 23, 1927

Approved.

ALVAN T. FULLER,  
Governor.

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THE COMMONWEALTH OF MASSACHUSETTS

Office of the Secretary

Boston, March, 25, 1927.

A True Copy

Witness the Great Seal of the Commonwealth.

(Signed) F. W. Cook,  
Secretary of the Commonwealth.

# The College

## History

In 1843, the Most Rev. Benedict Joseph Fenwick, second Bishop of Boston, founded the College of the Holy Cross. He gave the College the name of his Cathedral with the motto and seal of the Boston Diocese. He entrusted the direction of the College to the Fathers of the Society of Jesus. Classes began on November 2, 1843, and in 1844 the first College building was erected to accommodate ninety students. However, with the exception of the east wing, this building was destroyed by fire on July 14, 1852. With the cooperation of the then Bishop of Boston, Rt. Rev. John B. Fitzpatrick, the Fathers of the Society provided for the building of Fenwick Hall, and the College was reopened in October, 1853, with a newly enrolled Freshman Class. The first graduation class of this new period was that of 1858. From 1849 to 1853, and from 1858-1865, degrees were conferred by Georgetown University. In 1865, the College received its charter from the State and conferred its own degrees.

In 1868, a west wing was added and the central building was raised one story and capped with two stately towers. In 1875, the east wing of the building was raised and extended. In 1893, O'Kane Hall, really a wing of Fenwick Hall, was built, and classes were held in the new addition in the following year. By 1904, the College enrollment had passed the five hundred mark. To take care of the growing applications, Alumni Hall was built under the direction of the then President, Rev. Joseph F. Hanselman, S.J. With continued growth, a new Dormitory, Beaven Hall, was opened in 1914, in the Presidency of Rev. Joseph N. Dinand, S.J. It was named after Rt. Rev. Thomas D. Beaven, '70, Bishop of Springfield, who had sponsored its construction.

By 1920, the student body had increased to almost eight hundred so that a new Dormitory, Loyola Hall, was opened under the direction of Rev. James J. Carlin, S.J. in 1922. In 1924, St. Joseph's Memorial Chapel was dedicated. The Dinand Memorial Library was opened in 1927, under the Presidency of Rev. John M. Fox, S.J. Kimball Hall, the general student center, was erected in 1935, under the aegis of President Francis J. Dolan, S.J. Wheeler Hall was opened in January, 1940, in the Presidency of Rev. Joseph R. N. Maxwell, S.J.

In 1941, a peacetime Naval ROTC Program was inaugurated, but it was soon converted into the V1, V5, V7 and V12 wartime programs. In the wartime centennial year of 1943, our student body numbered 1,200. On June 26, 1946, the naval wartime programs were discontinued, and the College reverted to its peacetime status.

In 1947, under the Presidency of Rev. William J. Healy, S.J., an intramural Gymnasium was added to the College buildings. In the following year, Station WCHC was

dedicated. In 1951, a new Biology Building was dedicated by the then President, Rev. John A. O'Brien, S.J. On July 1, 1951, the Air Force Reserve Officers Training Corps was established at the College, and training began in September. By 1954, the enrollment was about 1,800 so that two new Dormitories came into existence under the direction of Rev. John A. O'Brien, S.J. In 1959, in the era of Sputnik and the missile age, the modern emphasis upon science was reflected with the dedication by President William A. Donaghy, S.J. of the Haberman Science Building. This twelfth building was named in honor of the memory of Rt. Rev. Richard J. Haberman, P.A., of the Class of 1906.

Throughout the years from 1843 to the present, amidst the changes which have come through noteworthy additions to the physical plant, the establishment of new organizations for students and alumni and administrative reorganizations, two strands of unity are clearly visible, namely the grand and noble purpose of education and the primacy of the spiritual. The first element of traditional unity, constancy of educational purpose, was stressed by ex-President Theodore Roosevelt in his Commencement Address of June 21, 1905, when he stated:

"It is eminently characteristic of our nation that we should have an institution of learning like Holy Cross, in which the effort is constantly made to train, not merely the body and mind, but the soul of man, that he should be made a good American, and a good citizen of our country."

The second unity, that of the primacy of the spiritual, was expressed by President William A. Donaghy, S.J. when he wrote:

"But with all the change that has swirled about this 'tall mountain citied to the top, crowded with culture' there are also comforting permanences. The basic undergraduate spirit of friendliness and fraternity, the deep spirituality which morning after morning crowds the altar rails and finds secretive figures in the dim chapel, the bright idealism so much in contrast to the cynicism on all sides—these, thanks to God, have not altered. And I feel certain that if Bishop Fenwick were to return, he would undoubtedly be confused by the material expansion at the same time that he would be consoled by the spiritual continuity."

## **Campus and Buildings**

The College of the Holy Cross is situated in Worcester, Massachusetts, the second largest city in the state, with a population of over 200,000.

The campus contains one hundred and sixty-three acres and is conveniently located at the southern end of the city, approximately two miles from the business district, at an elevation of 693 feet above the sea.

### **Fenwick Hall**

Named for the Founder of Holy Cross College, is the oldest of the college buildings. In the spring of 1875 the remnant spared by the fire of 1852 was raised and extended toward the east. The central span houses the offices of the administration on the first floor, faculty living quarters on the second and third, and student dormitories on the fourth. The east frontage is occupied, on the first floor, by the faculty refectory, while the upper part of the building contains the Community Chapel. The infirmary is located in a small wing adjoining this part of the building at its south end.

### **O'Kane Hall**

Named for a former beloved Rector of Holy Cross, stands at the summit of Linden Lane facing the campus. On the first floor is a spacious, comfortably furnished foyer and reception hall. The Fenwick assembly hall is located in the O'Kane building and features a large and well-equipped stage for dramatic productions. On the upper floors of the building are located several corridors of students' rooms.

### **Alumni Hall**

Erected through the generosity of former students, is a thoroughly modern, fire-proof building. The upper floors contain nearly one hundred student living rooms. The rest of the building is devoted to lecture-rooms, classrooms, offices for faculty members.

### **Beaven Hall**

Gift of the late Most Rev. Thomas D. Beaven, D.D., and the clergy of the Springfield diocese, is modern in every detail. The three upper floors, renovated in the summer of 1941, provide comfortable living quarters. Classrooms and office are located on the first floor.

### **Carlin Hall**

In 1941, the Board of Trustees of the College of the Holy Cross unanimously resolved to change the name of Loyola Hall to Carlin Hall. This change of name is intended to perpetuate the memory of the Very Reverend James J. Carlin, S.J., President of the College of the Holy Cross from 1918 to 1924. The upper floors provide living rooms. Classrooms, faculty offices and accounting laboratories are located on the lower floors.

### **Wheeler Hall**

Dedicated to the memory of the Rev. John D. Wheeler, S.J., for many years active in the administration of the College, the upper floors provide living rooms. Five classrooms are located on the lower floor.

### **Hanselman Hall**

A student dormitory for seniors is a modern three and one half story building with accommodations for one hundred and eighty-two students and eight faculty members. A spacious student lounge is located on the first floor. The building is named after the Reverend Joseph F. Hanselman, S.J., President from 1901 to 1906.

### **Lehy Hall**

A student dormitory for seniors, stands on the west side of Hanselman Hall and is similar to it in design and construction. It will accommodate one hundred and seventy-four students and eight faculty members. It is named after the Reverend John F. Lehy, S.J., President from 1895 to 1901.

### **Dinand Library**

Situated on the terraced slope between O'Kane and Beaven Halls, exemplifies the best tradition of the architecture of the Italian Renaissance. It was named after the Most Reverend Joseph N. Dinand, S.J., D.D., twice President of the College of the Holy Cross.

### **Kimball Hall**

A beautiful and commodious refectory building contains a kitchen and refectory accommodating twelve hundred students. It contains also a theatre accommodating seven hundred, a cafeteria, the office of Dean of Men, the bookstore and services.

### **Biology Building**

A modern three story building situated on the west side of Beaven Hall, is devoted exclusively to the teaching of biology. It contains two large lecture rooms, five laboratories, a reference library, museum, offices for the faculty, stock rooms, and other facilities.

### **Haberlin Hall**

A Physical Science Building designed for the departments of Chemistry, Mathematics and Physics, is on an eminence overlooking Linden Lane at the extreme western end of the Campus. The building houses libraries for each of the sciences, as well as laboratories, lecture rooms, and classrooms for general use.

### **The Athletic Fields**

Contain the football gridiron, the baseball diamond, the quarter-mile track, tennis courts, basketball courts, and facilities for all other outdoor sports. The baseball diamond on Fitton Field is bounded on the east by the football gridiron which is surrounded on four sides by stadia seating nearly 23,000. Freshman Field and Alumni Field are suitable for practice and for the games of the intramural teams. On the plateau that crowns the hill south of the College buildings, as well as on the lower east level, are laid out diamonds and gridirons for intramural contests, in which the majority of undergraduates participate.

# Educational System

## General Purposes

Since the turn of the century, we have been a restless and even rootless people. With the tremendous scientific advances of our time, traditions toppled and old-time certitudes corroded, so that it became the fashion to be intellectually contemptuous of our academic ancestors; respect for history was regarded as an ingenuous nostalgia for what would never return; and man's past was well forgotten because his future seemed so fantastic. True, two of the bloodiest wars of all time, international tensions, the decay of morals, the collapse of so many values which the centuries had canonized, gave pause to thinking men.

Now, tradition is not a musty museum in which we see only dusty, shrouded and outmoded ideas. The world changes but man does not. His ideas are constantly refurbished and replaced but his capacity to make decisions, to love or hate or be indifferent does not change. The Jesuit educational system, enamored of the past and yet eager for the future with all that it may hold, is based on this fundamental immutability of man. That system is summed up in the *Ratio Studiorum*, a schedule of studies which aims at the production of what we might simply call a civilized man. It is obvious that this end product is still worthwhile and is, in fact, desperately needed. Technological training, however excellent, will not in itself flower into such an educational result.

We have discovered how "to manipulate things in the service of human purposes," writes Elton Mayo of the Department of Business Administration at Harvard, but we have lost the moral perspective necessary to purify those purposes. Lecomte du Nouy observes that our technical achievements have far outstripped our moral capacities and remarks that the great ideas of history, the "lever-ideas" by which man raised himself and his status, have always been religious concepts. The College of the Holy Cross stands firmly convinced of and committed to that historical principle.

"It must never be forgotten," wrote Pius XI, himself a scholar of formidable stature and international reputation, "that the subject of Catholic education is man whole and entire, soul united to body in unity of nature, with all his faculties natural and supernatural, such as right reason and revelation show him to be; man, therefore, fallen from his original state, but redeemed by Christ and restored to the supernatural condition of adopted sons of God . . . The proper and immediate end of Christian education is to cooperate with divine grace in forming the true and perfect Christian, that is, to form Christ Himself in those regenerated by Baptism. The true Christian does not renounce the activities of this life, he does not stunt his natural faculties; but he develops and perfects them, by coordinating them with the supernatural." Leo XIII, likewise a giant of mind, had previously confirmed the same outlook.



This is not to confuse piety with the strictest and more comprehensive kind of education. Etienne Gilson well writes: "piety never dispenses with techniques. . . . No one, nor anything obliges the Christian to busy himself with science, art or philosophy, for other ways of serving God are not wanting; but if that is the way of serving God that he has chosen, the end itself, which he proposes for himself in studying them, binds him to excellence. He is bound by the very intention which guides him, to become a good savant, a good philosopher, or a good artist." Dietrich von Hildebrand has made the same point: "A Catholic university would have no meaning if it were nothing but a collection of Catholic men of thought and science, while following the model of the modern university in its general atmosphere. It requires the conscious production of an atmosphere filled by Christ, an environment imbued with prayer. . . . The students must breathe a Catholic air and Catholic spirit which will make them into anti-pedantic, humble, faithful, metaphysically courageous men of winged intelligence and yearning, and therefore capable of truly adequate and objective knowledge." He is, of course, in the spirit of Newman who complained bitterly of the segregation of knowledge and religion: "It will not satisfy me, what has satisfied so many, to have two independent systems, intellectual and religious, going at once side by side, by a sort of division of labor, and only accidentally brought together. . . . I want the same roof to contain both the intellectual and moral discipline. Devotion is not a sort of finish given to the sciences; nor is science a sort of feather in the cap, if I may so express myself, an ornament and set-off to devotion. I want the intellectual layman to be religious and the devout ecclesiastic to be intellectual."

That is the educational credo of Holy Cross. It is uncompromisingly intellectual, intransigently Catholic, and the history of the College which was founded in 1843 and her thousands of graduates have proved to us that this traditional approach needs constant review to keep abreast of progress but no basic revision to subscribe to those educational expediences which from day to day announce themselves as final educative solutions.

### Objectives

Holy Cross College, committed to the belief in the excellence of the Liberal Arts in producing "the Christian man," offers integrated programs of studies to train the mind of the student in accurate, logical thinking through courses in Logic, Mathematics and the Natural Sciences. Development of precise oral and written expression is the aim of courses in Composition, Rhetoric and Language, ancient and modern, while the imagination is stimulated by the study of Poetry. The student recognizes the essential immutability of man portrayed in Literature of the past and present and is made aware of the history of man as well as the contemporary scene by studies in History, Sociology and Philosophy.

This is the basic pattern of the Liberal Arts program at Holy Cross College and it provides an opportunity for the student to build solid undergraduate formation for study in major fields of concentration in the following areas: Biology, Chemistry,

Classics, Economics, Education, English, History and Political Science, Mathematics, Modern Languages, Philosophy, Physics, Sociology.

### Co-Curricular Activities

Ancillary to this pattern are carefully planned co-curricular activities which spring from the courses in which the student is enrolled and which offer him the opportunity to explore the values of his curriculum: Debating, Dramatics, the College Magazine and Newspaper, Student Organizations for Language, History, Mathematics, Philosophy, Political Science, etc.

### Religious Training

Holy Cross College insists that in every stage of intellectual development religious instruction be interwoven with training in the secular branches of knowledge. This instruction aims at planting in the heart such principles of rectitude as will afterwards serve as a guide, a warning, a stimulus. Since Religion is the highest concern of man, Theology is a prescribed subject for Catholic students.

As a consequence of the belief in the pervasive character of religion, opportunities for the foundation of life-long practices of Christian virtue are traditional to the Campus. Integral to the college year and a base for academic pursuits is the Annual Retreat, during which are given the Spiritual Exercises of St. Ignatius Loyola. Catholic students are obliged to attend all the exercises of the Retreat.

Central in the life of a Christian man is the Holy Sacrifice of the Mass. The Mass is man's social response to the need of his nature to worship God, while from it he derives the inspiration and spiritual strength to encounter small obstacles in life with Christian patience and big ones with the courage for victory. It is a holy tradition at Holy Cross that all Catholic students attend daily Mass. The tradition is honored by a college regulation of obligatory attendance.

At the beginning of each year there is offered the student Religion Motivation Week. At this time, by a series of instructive meditations concerning the personal and spiritual obligations of the Christian college man, the academic year is inaugurated and motivation generated for the intellectual and moral discipline of the life of a scholar.

Two Jesuit priests are Spiritual Counselors for the guidance of students in religious and spiritual matters. These Counselors are assisted by other Jesuit priests who are assigned to the residence halls.

### Discipline

A closer supervision is exercised over the students than is usual at the present day in most large colleges, but as the student advances in his college career a greater

measure of freedom is granted to him. However, it is the constant purpose of the College to encourage the growth of personal and corporate responsibility consistent with "the Christian man." Serious breaches of the code that demands respect for order, morality, personal honor and the rights of others will necessitate withdrawal from the College. The Administration reserves the right to dismiss a student at any time without any definite charge. Detailed regulations and customs governing discipline are found in the Student Hand-Book.

## Affiliations

The better to promote the educational ideals of the Society of Jesus and to share in the fruits of the scholarship of other institutions of learning, the College of the Holy Cross holds institutional membership in the following organizations:

The Catholic Educational Association, The American Council on Education, The Association of American Universities, The Association of American Colleges, The New England Association of Colleges and Secondary Schools, The American Association of Collegiate Registrars and Admissions officers, The Regents of the University of the State of New York, New England Conference on Graduate Education, The American Mathematical Society and The Jesuit Educational Association.

Members of the faculty are associated with: The Classical Association of New England, The Eastern Association of College Deans and Advisers of Men, The American Catholic Historical Association, The American Historical Association, The Jesuit Philosophical Association, The American Association of Jesuit Scientists, The American Association for the Advancement of Science, The American Mathematical Society, The Mathematical Association of America, Institute of Mathematical Statistics, American Statistical Association, Association of Teachers of Mathematics in New England, The American Physical Society, American Association of Physics Teachers, Optical Society of America, Acoustical Society of America, Institute of Radio Engineers, American Astronomical Society, The American Chemical Society, The New England Association of Chemistry Teachers, The American Electrochemical Society, The Chemical Society (London), The Faraday Society, The Franklin Institute (Philadelphia), The American Institute of Chemists, The American Academy of Political and Social Science, The American Political Science Association, The American Society for Public Administration, The American Economic Association, The National Catholic Industrial Conference, The Association of Librarians of America, The American Association of University Professors, Archaeological Institute of America, American Philological Association, The American Jesuit Historical Conference, The American Sociological Society, The American Catholic Sociological Society.

# General Services

## Student Health Service

All resident students at the College of the Holy Cross are entitled to medical service with the following privileges: (1) Consultation with the College Physician, daily, if necessary. (2) Visits by the College Physician while the student is confined in the the College Infirmary. (3) Board, room and nursing at the College Infirmary. Nursing attendance is rendered by the nurse regularly employed by the College. Special outside nurses, if employed, must be paid for by the student.

No student is obligated to patronize the College Physician. With the permission of the College Director of Health and at the expense of his parents, a student may consult any physician approved by his parents. When medicines are prescribed the expense is to be borne by the student. The College cannot furnish regular special diets to students who may require such treatment. Expenses incurred for hospital treatment must be defrayed by the individual student.

## Accident Insurance

In addition, the College has approved a student accident medical reimbursement insurance plan which offers the student maximum benefits at low cost for the calendar year. This supplementary plan may relieve parents of possible financial strain in meeting this type of unanticipated expenses. A circular giving details of this plan will be mailed to all parents with the September bill.

## Student Employment

Some employment is available at the College of the Holy Cross for students who need to earn part of their college expenses. To merit employment, students must meet certain academic, disciplinary and financial requirements. The compensation is proportionate to the number of hours of employment, and the amount earned is applied on the student's account with the College.

## Placement Bureau

The Placement Bureau was established to render service to all Holy Cross men who registered with the Bureau. Under-graduates of all classes are urged to utilize the vocational guidance facilities of the Bureau at any time. Seniors and alumni registrants are given every possible assistance in finding satisfactory employment.

A series of vocational guidance talks is held during the year in which successful alumni and other business and professional leaders speak informally on the subject of their own vocations and answer questions. Further guidance is given through the dissemination of career books, pamphlets and monographs covering many vocations and occupations.

From time to time, especially during the spring term, personnel officers of large corporations arrange through the Placement Bureau to come to the Holy Cross campus to interview seniors for prospective positions with their organizations.

#### **Dinand Library**

There are approximately 200,000 volumes in the Dinand Library and they represent to a satisfactory degree every major classification of the Library of Congress, according to which system the Holy Cross collection is catalogued. Hundreds of classified pamphlets, periodicals and manuscripts in various fields increase the students' reference resources.

In the Reading Room are found the principal reference collections, encyclopedias, dictionaries, bibliographies, year books, and concordances.

Occupying the entire lower floor of the east wing is the Browsing Room, designed for comfortable light reading and listening to classical music.

The Periodical Room is above and co-extensive with the Browsing Room. Over three hundred and fifty periodicals, from daily newspapers to annuals, both foreign and domestic, and in several languages, are received on subscription.

The west wing of the main floor houses the Museum, where are exhibited many of the choice, valuable and historic treasures of the College. Valuable paintings, sculptures, coins, books and pamphlets whose antiquity, rarity of edition give them a peculiar value, documents associated with the growth of the College, the history of the Church and the development of the country, autographs and manuscripts are some of the categories represented in the Museum exhibit. Of special interest is the growing collection of Jesuitana, which embraces the works of many early writers of the Society of Jesus.

Specialized science libraries are housed in the Biology Building and Haberlin Hall. (Cf. Appendix for names of donors to libraries.)

#### **Guidance**

A special guidance service for students on educational and vocational problems is available at the Office of Student Personnel. Special testing will be administered upon request which may provide the student with the means of more fully understanding himself, his special interests, aptitudes, abilities and emotional adjustment. The Director holds counseling interviews with students daily by appointment from nine to five.

#### **Reserve Officers' Training Corps**

The College of the Holy Cross offers, as part of its regular curriculum, the ROTC programs of the Air Force and the Navy. The programs of both services consist of one course each semester for four years (acceptable for credit towards a

degree), one drill period per week, and at least one summer training camp or cruise.

The Air Force program leads to a commission in the Air Force Reserve and prepares for specific duties in the Regular Air Force, the Air Force Reserve and the Air National Guard Units. The Naval ROTC program prepares qualified officers for the Navy and Marine Corps, the Naval Reserve and the Marine Corps Reserve.

Certain NROTC students have a portion of their costs borne by the United States Navy in accord with a contract with the College. This contract usually covers cost of tuition, fees (except refundable deposits) and necessary books. Students participating in this program are personally responsible for costs not borne by the Navy.

A description of both programs and the requirements for enrollment may be found in this section *Courses of Instruction* of this catalogue under "Air Science" and "Naval Science".

#### Entertainment

In addition to the special lectures given for all students, or for special groups by qualified lecturers, special theatrical productions, concerts and recitals are given during the year. Motion pictures are presented at least once a week.

#### Dormitory Accommodations

Under normal conditions the residence halls of Holy Cross have accommodations for fourteen hundred students. Each living room in the student dormitories is provided with the essential articles of furniture, such as desks, chairs, lockers, beds, mattresses, pillows. Boarding Freshmen contract privately with a Linen Service Company recommended by the College which will supply and launder two sheets, one pillow case, two bath towels and two hand towels each week of the school year at a charge of \$28.00 each year. Room assignments are made by the office of the Dean of Men.

#### Language Laboratory

A Language Laboratory was installed on the ground floor of Carlin Hall in 1956 at a cost of \$20,000. Each of its forty booths is equipped with modern electronic instruments: tape recorder, microphone, headset, and a channel selector to receive any one of the five different programs transmitted from the console. The work performed in the Laboratory is coordinated with classroom activity, and is of invaluable assistance for the oral-aural approach to language.

#### The Reading Clinic

In January 1960, a Reading Clinic was opened to test the reading skills of students and to offer opportunities for improvement of reading speed and comprehension. Students are recommended by the faculty and the training is undertaken voluntarily by the students. No credit will be offered for the training.

# College Expenses

## General

### Tuition

\$775.00 per academic year. This includes all ordinary charges except laboratory and special fees.

### Board and Room

\$975.00 per academic year. This includes infirmary accommodation when required.

Some room accommodations will cost \$100.00 less per academic year.

The above expenses do not include textbooks, laboratory fees, or incidental expenses.

### Payment of Bills

Bills for one half of each of these fees will be issued not later than two weeks prior to the opening of each semester as follows:

BOARDING STUDENT	\$875.00
DAY STUDENT	\$387.50

This semester bill is payable in advance, but in no case later than the day of registration.

Bills for other fees (laboratory and special fees) are payable when rendered.

For those parents or guardians who prefer monthly payments toward the cost of tuition and the charges for board and room arrangements may be made with The Tuition Plan, Incorporated, One Park Avenue, New York 18, New York. Detailed information will be mailed during the summer of 1960.

Make all checks and money orders payable to the Treasurer, College of the Holy Cross.

## Special Fees

### Application Fee

A fee of \$10.00 (non-refundable) must accompany all applications for admission to the College.



### **Acceptance Deposit**

Upon receipt of formal notice of acceptance for admission to Holy Cross, all candidates are required to forward a \$50.00 Deposit. Of this amount \$10.00 (non-refundable) is apportioned to the student's Matriculation Fee; the remainder will be credited to the student as the Room Deposit for the four years of residence. At the end of the senior year, or sooner if circumstances warrant, the Room Deposit will be refunded, less charges for property damage.

### **Change of Curriculum**

This represents a major change in the education of the student. The fee for such a change will be \$10.00.

### **Change of Course**

A change of course within a curriculum may be accomplished with the approval of the Dean. The fee for such a change will be \$5.00.

### **Conditional Examination**

Freshmen are permitted a re-examination in subjects at the discretion of the instructor. The charge for this second examination will be \$5.00.

### **Examination Fee**

A student obliged to take an examination, due to absence from the regular examination, is charged a fee of \$5.00 for each such examination.

### **Extra Courses**

The fee for such courses is at the rate of \$20.00 per semester hour credit.

### **Graduation Fee**

A graduation fee of \$15.00 is assessed against each student who is a candidate for a degree.

### **Late Registration Fee**

A student who fails to register at the appointed time is required to pay a fee of \$5.00.

### **Withdrawal from Course:**

With the approval of the Chairman of the Department concerned, a student may withdraw from a course. The charge for this withdrawal will be \$5.00.

## Laboratory Fees

Each student taking a laboratory course is liable for breakage, damage and loss of apparatus. In addition to the annual tuition fee, there is a fee for each laboratory course taken.

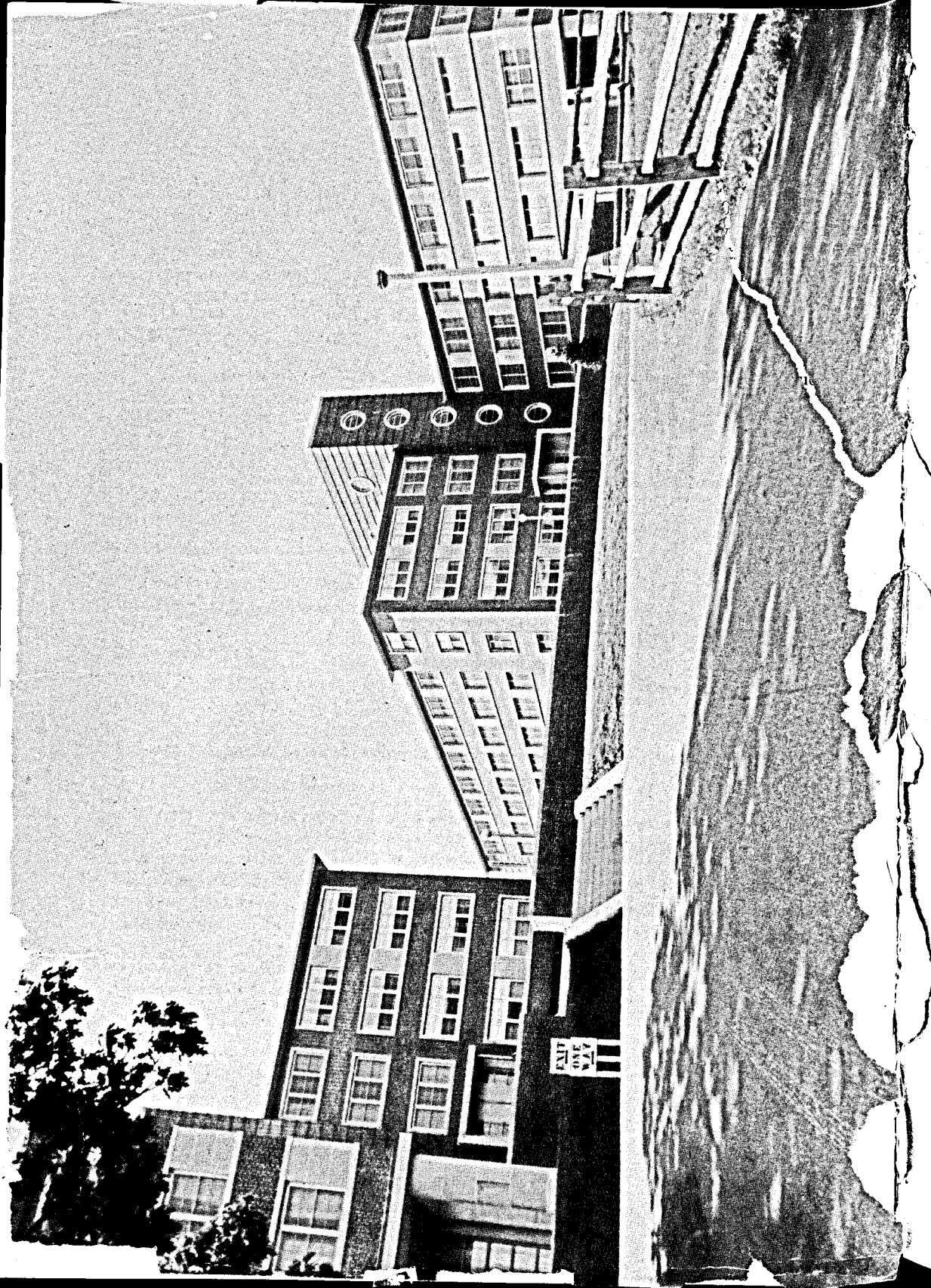
	Breakage Deposit	Fee
Chemistry 15; 16; 11; 12; 55; 56	each \$ 7.50	each \$12.50
Chemistry 41; 42	" 7.50	" 7.50
Chemistry 65; 66	" 17.50	" 12.50
Chemistry 57	" 15.00	" 10.00
Chemistry 201; 207; 208	" 15.00	" 25.00
Chemistry 203; 213	" 35.00	" 25.00
Chemistry 21; 25; 61; 62;	" 15.00	" 20.00
Chemistry 21: 32	" 20.00	" 20.00
Biology 67		10.00
Biology 41; 42		each 10.00
All Other Biology Courses		" 15.00
Physics 73; 74		" 5.00
All Other Physics Courses		" 10.00
Accounting		5.00
Language Laboratory		10.00
Reading Clinic		50.00

Students registered for a two semester science course will be billed for the full year course.

Breakage deposits, less cost of breakage and/or loss of equipment, are refundable at the completion of the course.

Students enrolled in the Air Force ROTC must deposit \$25.00 with the Treasurer of the College as a guarantee that they will return government property in good condition. This deposit is refundable.

The Trustees of the College reserve the right to change tuition rates and to make additional charges within the College whenever they believe it to be necessary.



# Scholarships and Loans

## General Information

A limited number of scholarships are awarded annually to incoming and enrolled students from the income on founded scholarships. At times and to the amount that the College's financial position permits, this income from founded scholarships is supplemented by grants from College funds. A few scholarships, restricted by the donors to definite categories of applicants, offer awards to the amount of full tuition and partial or total expenses for board and room at the College. All other scholarships only grant full or partial tuition. As the College has up to the present no Loan Fund, loans from the College for the payment of expenses are not granted.

Incoming Freshmen may apply to the office of the Dean of Admissions for a scholarship application form, along with their request for an application form for admission. Applications for scholarships by incoming freshmen should be filed with the office of the Dean of Admissions not later than March 15.

Students already enrolled should obtain a scholarship application form from the Office of Student Personnel. This scholarship application form should be filed with the Office of Student Personnel not later than July 1. Transfer students are not eligible for scholarship assistance until they have completed one year of study at Holy Cross College.

Awards to incoming freshmen will give recognition to those candidates who have manifested exceptional proficiency in their academic and extra-curricular achievements at the secondary school level and who without financial assistance would be unable to meet the expenses of a college education. The factors of promise of leadership, moral character and personality will also be considered. Scholarship applicants are required to take the full battery of the College Board Examinations as described on page 51. Candidates must arrange to have the test scores forwarded to the office of the Dean of Admissions.

Students already enrolled must attain a "B" average in all subjects to qualify for a scholarship, or for renewal of scholarship. Financial need, participation in extra-curricular activities, fidelity and loyalty to the traditions and ideals of Holy Cross are other factors that also will be considered.

All scholarships are granted on a year-to-year basis but will be renewed if the student continues to meet the requirements of the award. Application for the renewal of the scholarship for the succeeding year must be made not later than June 30th to the Office of Student Personnel. Forms for this purpose may be obtained from that office.

The following types of scholarships will be found amongst those listed on the following pages: 40, 41, 42, 43, 44, 45, 46, 47, 48, and 49.

### **General Scholarships**

These are open to all incoming freshmen and enrolled students. The amount of the award is the income on the gift of the donor.

### **Restricted Scholarships**

These by the intention of the donor are restricted to definite categories of applicants who often must be from a definite locality, parish or high school. An applicant, who wishes to apply for a restricted scholarship, should make certain that he is eligible for this scholarship.

### **Competitive Scholarships**

Some scholarships by the intention of the donor are awarded on the basis of a competitive examination. The competitive examinations required by the College for eligible scholarship candidates are the College Board Examinations. Only incoming freshmen are eligible for competitive scholarships.

### **Holy Cross College Scholarships**

There are a limited number of tuition or other partial awards that are made from the College funds, at the times and to the total amount that financial position of the College permits.

## **List of Scholarships**

### **The Governor Ames Scholarship**

Established in 1887 by Governor Oliver Ames.

### **The Eugene A. Bickford Scholarship**

Founded in October, 1932, from the estate of Mrs. Mary A. Magenis of Brookline, Mass., in memory of her brother, the late Eugene A. Bickford, '96. The annual income to provide for the education of a deserving student under such conditions and regulations as imposed by the Faculty of the College.

### **The Rev. Charles E. Burke Scholarship**

Established in 1895. Appointment to be made from residents of St. Francis Parish, North Adams, Mass.

### **The James M. Burke Scholarship**

Established April 1, 1950 from the Estate of William H. Burke. The beneficiary is to be selected by the Trustees of the College.

#### **The Robert J. Cairns Memorial Fund**

Established September 24, 1953 by bequest from the estate of Alfred F. Finneran, for scholarship aid to worthy students.

#### **The Thomas Callaghan Scholarship**

Founded in 1914 by the late Thomas Callaghan of Leicester, Mass., limited to residents of Worcester County, "preference to be given to those preparing for the priesthood."

#### **The Honorable James Bernard Carroll Scholarship**

Founded in 1939 by Mrs. James Bernard Carroll as a memorial of her husband, the late Justice James Bernard Carroll of the class of 1878. Restricted to graduates of St. Michael's Cathedral High School, Springfield, Massachusetts. Selection to be made by the Very Reverend Rector of Holy Cross College and the Reverend Rector of St. Michael's Cathedral, Springfield, on candidate's character, scholarship and extracurricular achievements.

#### **The Frank D. Comerford Memorial Fund**

Established by Archibald R. Graustein in 1959.

#### **The Connecticut Valley Alumni Scholarship**

Established in 1912 by the Alumni of Connecticut Valley.

#### **The Maurice Connor Memorial Scholarship**

Established in 1929 by Mr. John T. Connor in memory of his brother, Maurice. The intention of the donor is to provide, for one boy, board, room, tuition and fee charges, as far as the income will provide them. The single beneficiary is to be chosen by the Pastor of St. Mary's Church, Westfield, Mass.

#### **The Monsignor George S. L. Connor Scholarship**

Established October 18, 1955 by gift of Monsignor George S. L. Connor, '07. Selection to be made by the President of the College who shall give first preference to a worthy applicant who is a member of Holy Name Parish in Springfield, Massachusetts. If no such eligible candidate applies, then such a candidate who graduates from Cathedral High School shall be considered; if none such, then any applicant from the Springfield High Schools. Candidates must pass scholarship test as set up and be of good personality with evidence of leadership qualities.

#### **The Thomas Costello and Anna Costello Scholarship**

Established December 9, 1947, by bequest of Susan A. Costello in memory of her parents, and by a bequest from the estate of Fanny Goodwin Hobbs. Income to be

used to aid a student who lacks sufficient financial means for his education and who has expressed the intention of entering the priesthood.

#### **The Crowley Family Memorial Scholarship I.**

Established July 2, 1947, by bequest of Miss Bridget T. Crowley of Springfield, Mass. Beneficiary to be selected by competitive examination and is open to students of the Parochial and Public High Schools of Springfield, Mass., who are morally, mentally and physically worthy and competent and who show promise of ability, but who have such limited financial means that, if not aided by a scholarship, would be unable to attend college.

#### **The Crowley Family Memorial Scholarship II.**

Established 1947 by bequest of Miss Bridget T. Crowley of Springfield, Mass. Conditions same as the Crowley Family Memorial Scholarship I.

#### **The Crowley Family Memorial Scholarship III.**

Established 1947 by bequest of Miss Bridget T. Crowley of Springfield, Mass. Conditions same as the Crowley Family Memorial Scholarship I.

#### **The Right Rev. Monsignor Daniel F. Curtin Scholarship**

Established in 1921 by the Rt. Rev. Monsignor Daniel F. Curtin, Glens Falls, N. Y., to be appointed by the pastor of St. Mary's Church, Glens Falls, N. Y.

#### **The Daniel T. Devine Scholarship**

Established in October 1945 from the estate of Mary F. Devine in memory of her brother, Rev. Daniel T. Devine. To be awarded as a result of competitive examination to the member of the graduating class of St. Mary's Parochial School, Milford, Mass., who has attended said high school for four years and who has been a member of St. Mary's Parish throughout his high school course.

#### **The James F. Donnelly, '99 Scholarship**

Established May 11, 1956 by gift from the Sylvan Oestreicher Foundation.

#### **The Eastern Connecticut Holy Cross Club Scholarship**

Established February 2, 1955 for a deserving student from that area.

#### **The Theodore T. and Mary G. Ellis Scholarship Fund**

Founded in 1941 by the estate and through the generosity of the late Theodore T. and Mary G. Ellis. From the income of this fund, several scholarship awards of full or partial tuition are annually granted to residents of the City of Worcester.

**The Rev. Patrick J. Finnegan, P. R. Scholarship**

Established November 28, 1955 by bequest from the estate of Rev. Patrick J. Finnegan. Income to be used to assist needy boys from Portsmouth, N. H.

**General Motors College Plan Scholarship**

A four year scholarship offered annually by General Motors Corporation. The amount of the award varies with the financial need of the recipient as determined by the General Motors Scholarship Committee.

**The "In Memory of David Goggin" Scholarship**

Founded in 1925 by Mrs. Catherine M. Goggin, in memory of David Goggin. Preference to be given a relative.

**The Thomas F. Grogan Scholarship**

A memorial of the deceased father of Dr. Richard H. Grogan, '35, and his brother, Fr. Thomas Grogan, S.J.

**The Monsignor Griffin Scholarship**

Established in 1895, limited to residents of St. John's Parish, Worcester, Mass.

**The Mary Agnes Haberlin Foundation**

For worthy students chosen by the President or Faculty of the College.

**The John H. Halloran Scholarship I.**

Established in 1909 by Mr. John H. Halloran of New York, as a memorial of his brother, the late William J. Halloran, of Worcester, competition open to the country.

**The John H. Halloran Scholarship II.**

Established in 1921 by Mr. John H. Halloran of New York, as a memorial of his brother, the late William J. Halloran, of Worcester. Selection to be made from the students of the public and parochial schools of Northampton, Mass., by means of competitive examinations.

**The Rev. Jeremiah J. Healy Scholarship I.**

Founded in 1912 by the Rev. Jeremiah J. Healy, of Gloucester, Mass., for a candidate for the priesthood worthy of financial aid.

**The Rev. Jeremiah J. Healy Scholarship II.**

Same as the "Rev. Jeremiah J. Healy Scholarship I."



#### **The Richard Healy Scholarship**

Established in 1908 by Mr. Richard Healy of Worcester, open to competition for residents of Worcester County regardless of creed.

#### **The Mr. and Mrs. Richard Healy Scholarship**

Established in 1916 by Mr. and Mrs. Richard Healy of Worcester, for benefit of a direct relative of donors.

#### **The Rev. Frederick W. Heaney, S.J. Scholarship**

Established in 1920 by Miss Lillian Heaney, in memory of her deceased brother, the Rev. Frederick W. Heaney, S.J.

#### **The John W. Hodge Scholarship**

Established in 1946 by a bequest from the late John W. Hodge to aid some worthy Catholic boy from Cambridge, Mass., the terms and conditions of which are to be fixed and regulated by the College.

#### **The John T. Holland '17, Memorial Scholarship**

Founded January 2, 1954 by gift from Matthew M. Berman. To be used for worthy students selected by the President of the College.

#### **The Holy Cross College Scholarships**

These are a limited number of tuition or other partial awards that are made from the College funds, at the times and to the total amounts that the financial position of the College permits.

#### **The John Collins Hurley Scholarship**

Established April 28, 1953 by bequest from the estate of Margaret M. Hurley. Income to be used for education of worthy graduate of Durfee High School, Fall River, Mass.

#### **The Warren Joseph Hurley Scholarship**

Established in 1929 by Mrs. Jeremiah J. Hurley in memory of Warren Joseph Hurley, ex-'29, for the benefit of one or more worthy students aspiring to the priesthood. Selection to be made by the President of the College.

#### **The "In Memoriam" Scholarship**

Established in 1915 by an alumnus of the College for a deserving student.

**The Otto Seindenburg King Scholarship**

Established in October, 1954 by gifts from Atty. John King, '25. Income to be used for a deserving student.

**The Rev. Michael H. Kittredge Scholarship**

Founded in 1917 by Rev. Michael H. Kittredge, '75.

**The Massachusetts State Council of Knights of Columbus Scholarship Fund**

Founded in 1937 by the Massachusetts State Council Knights of Columbus; open to members and sons of members of the Knights of Columbus residing and having their membership in the Order in Massachusetts. Award to be made by competitive scholastic examinations under the administration of the College of the Holy Cross.

**The Patrick W. Lally Memorial Scholarship**

Established in March 1954 from the estate of James Lally to be awarded to a worthy graduate of St. Mary's High School, Milford, Mass., who will be selected by the President of the College of the Holy Cross.

**The Michael J. Lawlor Scholarship**

Established in February, 1949, by bequest from the late Retta M. Lawlor. Income to be used to aid a bright and needy student, resident of Waterbury, Conn., who, in the opinion of college authorities, shall be deserving of financial assistance.

**The John J. Leonard Scholarship of the M.C.O.F.**

Founded in 1926 and restricted to members, or sons of members, of the M.C.O.F., selection to be made by competitive examinations.

**The Rev. John G. Mahoney, S.J., a Former Professor at the College, and James E. Mahoney, '10, Memorial Scholarship**

Founded in 1946 by Mrs. Edward C. Donnelly in memory of her brothers; to be awarded to a deserving student studying for the degree of Bachelor of Arts in the Classical Course who is to be selected by the President of this College.

**The Henry Vincent McCabe Scholarship**

Established in 1916 by the late Mary McCabe of Providence, R. I., for a deserving student.

**The Rev. Denis F. McCaffrey Scholarship**

Established September 29, 1953 by bequest from the estate of Rose A. McCaffrey.

#### **The Peter McCord Scholarship**

Established by Mary Lambert McCord for a deserving student.

#### **The Rev. David F. McGrath Scholarship I.**

Established in 1907 by the Rev. David F. McGrath, '70, beneficiary to be selected by competitive examinations. Restricted to graduates of St. Mary's Parish School, Milford, Mass., if there be more than one eligible candidate. If but one such, graduates of Milford Public High School may be admitted to competition; if but one candidate from both schools, anyone otherwise eligible in the State to be admitted to competition. The beneficiary will receive board, lodging and tuition for an academic year of two semesters. All other expenses must be met by the one holding the scholarship.

#### **The David F. McGrath Scholarship II.**

Established in 1920 by the Rev. David F. McGrath, '70; conditions same as the "Rev. David F. McGrath Scholarship I."

#### **The David F. McGrath Scholarship III.**

Established in 1920 by the Rev. David F. McGrath, '70; conditions same as the "Rev. David F. McGrath Scholarship I."

#### **The Monsignor John W. McMahon Scholarship**

Founded in 1938 under provision of the will of Rt. Rev. Msgr. John W. McMahon, '67, to give scholarship aid to a Holy Cross student to be designated by the Reverend Pastor of St. Mary's parish, Charlestown, Boston, Massachusetts, preference being given to students coming from St. Mary's parish.

#### **The Patrick J. Murphy Scholarship**

Established in 1914 by Mrs. Ellen M. Murphy, as a memorial to her husband, the late Patrick J. Murphy, Worcester, Mass.

#### **The Monsignor Richard Neagle Scholarship**

Founded in 1943 by His Excellency the Honorable Alvan T. Fuller, former Governor of the Commonwealth of Massachusetts, in memory of the late Right Reverend Monsignor Richard Neagle of the Class of 1873, to assist boys qualified, in the opinion of the faculty, but who otherwise could not afford such an expenditure as would be necessary to enjoy the educational and religious advantages of the College of the Holy Cross.

#### **The Denis F. and Loretto Radel O'Connor Scholarship**

Established May 26, 1955 by Dr. Denis F. O'Connor, '93, to be used for a worthy student to be selected by College authorities.

**The O'Driscoll Scholarship**

Established in 1874, for a student (limited to residents of the City of Worcester), who is a candidate for the priesthood and is selected by the Bishop of Worcester or his delegate.

**The May and Sylvan Oestreicher Scholarship**

Established December 30, 1957 by gift of Sylvan Oestreicher.

**The Mary C. O'Neil Fund for Bristol County Students**

Established January 7, 1955 by gifts from Margaret T. O'Neil, to be used to aid a student from Bristol County.

**The Rev. Daniel H. O'Neill Scholarship I.**

Established 1895, limited to residents of St. Peter's Parish, Worcester, Mass.

**The Rev. Daniel H. O'Neill Scholarship II.**

Established in 1908, limited to the residents of the City of Worcester.

**The Rev. Dr. Patrick B. Phelan Scholarship I.**

Established in 1917 by Rev. Dr. Patrick B. Phelan, '69; open to competition for graduates of the Sacred Heart School, Holyoke, Mass.

**The Rev. Dr. Patrick B. Phelan Scholarship II.**

Same as "Rev. Dr. Patrick B. Phelan Scholarship I."

**The David H. Posner and Mary Murphy Posner Foundation**

Founded July 1, 1957 by bequest from the Estate of Mary M. Posner. Income to be used toward tuition of worthy students.

**The Rev. John J. Power Scholarship**

Established in 1907 by the late Rev. John J. Power, D.D., limited to residents of St. Paul's Parish, Worcester, Mass.

**The Mary A. Prendergast Scholarship**

Founded in 1945 under the will of the late Mary A. Prendergast for deserving orphan students.

**The "Quid Retribuam" Scholarship**

Established in 1907 by a friend of Education in gratitude for Divine favors; if not filled by founder, competitive examinations will be held.

**The Patrick W. Rafferty Scholarship**

Established in 1920 and open to competition among deserving students of the City of Worcester.

**In Memory of Dennis M. and Josephine F. Reardon Scholarship**

Established January 11, 1952 by bequest from the estate of Josephine F. Reardon. Income to be used to aid a worthy student preparing for the holy priesthood.

**The John Reid Scholarship**

Established in 1894, limited to residents of Worcester.

**The Catherine F. Reilly Scholarship**

Established June 1, 1955 by bequest from the estate of Joseph J. Reilly, '04, in memory of his mother. Income to be used for a worthy student to be selected by College authorities.

**The James H. Reilly Scholarship**

Established June 1, 1955 from the estate of Joseph J. Reilly, '04, in memory of his father. Income to be used for a worthy student to be selected by College authorities.

**The Reilly Memorial Scholarship**

Founded in 1922 by the late Joseph J. Reilly, '04.

**The Mary J. Robinson Scholarship**

Established in 1943 by the late Mary J. Robinson in memory of her mother and father and brothers to assist deserving young men of the Roman Catholic Faith in obtaining a collegiate education at the College of the Holy Cross.

**The Rochester Alumni Scholarship**

For a deserving student from Rochester, N.Y.

**The Rev. William H. Rogers Scholarship**

Established in 1918 by Rev. William H. Rogers, '68.

**The Hon. John E. Russell Scholarship**

Established in 1907 by a Friend of the College.

#### **The Elizabeth Spang Scholarship**

Founded in 1936 by the will of Elizabeth Spang of West Haven, Connecticut. This income to be used toward the education of a "student of Holy Cross College whom the governing body of said College may deem to be in need of financial assistance for his college work and worthy of said scholarship."

#### **The Springfield Club Scholarship**

Established by the Holy Cross College Alumni Club of Springfield, Massachusetts. The recipient of the award will be selected by Board of Admissions at the College. It is subject to renewal under usual conditions. Preference will be given candidates from the city of Springfield or the Springfield area.

#### **In Memory of Helen M. and John F. Tinsley Scholarship**

Established November 20, 1953 by bequest from the estate of John F. Tinsley. Income to be used to assist worthy students selected by the President of the College.

#### **The Scholler Foundation Scholarship**

Established October 24, 1955.

#### **The Rev. David W. Twomey, S.J. Scholarship**

Established October 10, 1955 by gifts from family and friends of Fr. Twomey, S.J. Income to be used to aid a worthy student.

#### **Union Carbide Scholarships**

Offered by the Union Carbide Educational Fund of the Union Carbide and Carbon Corporation, these scholarships offer deserving students who are interested in a business career the complete cost of tuition for a full, four-year academic course. In addition, they provide reasonable allowances for the necessary books and required fees. This program is in process of termination. No new candidates will be accepted.

#### **The Rev. Robert Walsh Scholarship**

Established in 1895, limited to residents of the Immaculate Conception Parish, Worcester, Mass.

#### **The Stephen W. Wilby Scholarship**

Founded by the Naugatuck Valley Alumni Association and friends in Connecticut.

## **National Defense Student Loans**

Loans will be available from the College of the Holy Cross to qualified students under the National Defense Education Act of 1958 in varying amounts determined by the applicant's need and by funds available to the college at the time of the application. Minors will be required to have co-signers. Under the law, student borrowers must be United States nationals. Special consideration will be given to the applications of students with a superior academic background who express a desire to teach in elementary and secondary schools, or who show a superior capacity or preparation in science, mathematics, or a modern foreign language. Eligible students in other fields will be given full consideration. An applicant must be a full-time student in good standing, and must be in financial need of the loan to complete his course of study. The loan bears interest at the rate of 3% per annum commencing one year from the date the borrower ceases to be a full-time student in an institution of higher education. The principal amount of the loan, together with interest due, is to be paid back to the college in ten equal installments, beginning one year from the date the borrower ceases to be a full-time student in an institution of higher education. The Act provides that borrowers who, upon graduation, enter public school teaching may be granted a remission of up to one-half of the indebtedness. Complete information and application forms may be obtained from the Office of Student Personnel.

# Admission to the College

## GENERAL

Candidates for admission to the College of the Holy Cross must meet certain standards of quantitative and qualitative excellence and give evidence of motivation, maturity and emotional stability.

The Committee on Admissions will evaluate the applicant's qualifications in terms of the traditions and standards of the College. Possession of the required scholastic credentials is not to be construed as a guarantee of acceptance. More pertinent is the unspoken promise of the applicant that he will achieve the fullness of dignity of Christian manhood in the arts, the sciences, a profession or in business.

## APPLICATION

All correspondence relative to the procedure on application and all inquiries on matters of interest to prospective candidates should be addressed to The Dean of Admissions.

## METHOD OF ADMISSION

Write to The Dean of Admissions for application form and pre-application card.

Return the pre-application card with non-refundable fee of ten dollars.

Arrange to take College Board Examinations and to have the scores sent to the Office of Admissions.

Arrange to have your school principal return the completed application form to The Dean of Admissions before 1 April.

Family physician should furnish certified statement of good health.

## ENTRANCE EXAMINATIONS

All applicants must take the College Entrance Board Scholastic Aptitude Test in December, January, or February of their last year in secondary school, as well as the College Board Achievement Tests in December or March. The three achievement tests must include the test in English Composition, one in a modern foreign language which has been studied two years in secondary school, and a third to be freely chosen by the student.

The General Educational Development Test and the Navy College Aptitude Test are not accepted for entrance into college in place of the College Entrance Board Tests.



### ACCEPTANCE DEPOSIT

Candidates, upon receipt of final notification of the acceptance of their applications, are obliged to forward a guarantee fee of fifty dollars (\$50).

### REGISTRATION

Freshmen and new students will receive all information relative to registration upon application to the Office of the Dean of Admissions.

All students must report to the Lounge Room, O'Kane Hall at the time appointed, and fill out enrollment cards for the semester. A certificate from the Treasurer for payment of the semester bill must be presented to the Registrar.

For failure to register at the appointed time, students will be charged a late registration fee of five dollars.

Before registration, each student must file in the Office of the Dean of Admissions a certified statement of good health from his physician. Failure to fulfill this requirement by the day assigned will cancel acceptance by the College.

### BASIS FOR ADMISSION

The decision of the Board of Admissions will be based on the following factors:

1. Graduation and academic performance in secondary school.
2. The results of the pre-college tests.
3. The recommendation of the high school principal.
4. The health, moral character, extra-curricular interests and achievements of the candidate.

### ADVANCED PLACEMENT

In 1952, the College Entrance Examination Board instituted the Advanced Placement Program in order to allow the superior student to advance more rapidly and more richly in his chosen field. Holy Cross College policy presupposes that the candidate has pursued, during his senior year in high school, a strictly Freshman-college-level course in the subject in which he seeks advanced placement, and has attained, in the Advanced Placement Test of the College Board program, a test-score acceptable both to the Committee on Admissions and the Chairman of the particular department concerned. Each candidate's record is studied individually, and the decision regarding advanced placement is made on the merit of each individual's record of achievement. The College will also welcome for early admission those superior students, particularly in Jesuit secondary schools, who have completed the regular, four-year course at an earlier date.

## HONORS PROGRAM

The College offers an Honors Program to students in all curricula leading to the degree of Bachelor of Arts or Bachelor of Science. Gifted students will be invited to participate in the Honors Program and will be awarded the Honors Degree on the basis of distinguished course grades, written and oral examinations, and a thesis. In addition to homogeneous grouping, Honors students will be introduced to such liberal courses as Music Appreciation and Fine Arts. Competence in more than one modern foreign language will be recommended to them. They will be given the opportunity for seminar work in their major field as well as in philosophical studies. This sharing of a common intellectual experience will deepen and widen the scholarship of the student.

Tentative acceptance of students for the Honors Program will be made by the Committee on Admissions. At the end of the first semester of the Freshman year, the recommendations of Chairmen of Departments and instructors will be used as a basis for judgment of the qualifications of the candidates for the Honors Degree.

### EARLY ACCEPTANCE PLAN

Beginning in September, 1960, well-qualified high school seniors may become candidates for admission for the Holy Cross College class of 1965. Applications, together with the Application Fee of \$10.00, should be sent to the Office of Admissions prior to October 1, 1960. On or about November 1, 1960, the candidates will be notified of admission, rejection or, in doubtful cases, postponement of decision until the month of May.

Each early applicant will be considered on the basis of

- 1) recommendation of high school principal or guidance counselor.
- 2) his 3-year record in high school.
- 3) the results of the required College Board Scholastic Aptitude Test and the Scholastic Achievement Tests taken in the Junior year of high school.

Candidates accepted under these conditions will be expected to complete the Senior year in high school satisfactorily and to submit a record of scholastic work at the end of the first and second semesters. They will not be required to repeat any College Board Examination.

Upon receipt of formal notice of acceptance, candidates are required to forward a non-refundable deposit of \$50.00. Of this, \$10.00 constitutes the Matriculation Fee; the remainder will be credited to the student as the Room Deposit for the four years of residence. At the end of the Senior year, or sooner if circumstances warrant, the Room Deposit will be refunded, less charges for property damage.

The candidate on whose application decision has been postponed will be given consideration in the spring. He will be asked to submit a record of his school work for the first half of his Senior year, along with the results of senior College Board Scholastic Aptitude and Achievement Tests as additional evidence.

## ORIENTATION PROGRAM

For a period of several days following upon Registration and before the formal opening of classes all Freshmen are required to participate in the orientation program conducted under the supervision of the Dean of Freshmen-Sophomores and the Heads of Departments. By this means the College seeks to aid the new student in properly adjusting himself to college life and to impress him with the distinctive advantages and educational opportunities which the College offers to its undergraduates. During this period Freshmen will have an opportunity to become acquainted with the physical features of the campus, to inspect the various college buildings and to note the location of lecture halls and classrooms. The sequence of guidance lectures given at this time by various members of the Faculty is planned to equip the student with a knowledge of the aims and scope of the various courses and to advise him with regard to efficient study techniques and proper use of the Library. A series of placement tests will be given to all Freshmen during this period. During this period also, the student meets his faculty adviser.

## ADMISSION OF SPECIAL STUDENTS

Occasionally applicants who fulfill all the requirements for admission may, with the approval of the Committee on Admissions, choose special courses without following a complete degree program. Such applicants will follow the procedures outlined for advanced standing applicants.

## ADMISSION TO ADVANCED STANDING

A student honorably dismissed from another college may be considered for admission to the College of the Holy Cross on advanced standing. After an appraisal of his previous college record, credit will be allowed for such courses as are equivalent to courses offered at Holy Cross College and which have been passed with a grade of at least C. Such a student will be required to complete satisfactorily all the prescribed courses leading to the Bachelor's degree and to complete at least the full Senior year's work at Holy Cross College. An applicant for advanced standing should have the proper officials of institutions previously attended forward to the Office of the Dean official transcripts of secondary school and college records.

Students accepted with advanced standing are not eligible for scholarship assistance until they have completed one year at this College, and meet the other requirements for qualification.

## VETERANS

Returning veterans who, prior to their enlistment, satisfactorily completed their secondary school studies and are eligible for training under the educational benefits of Public Laws 550 and 894 will be accepted for admission to Holy Cross as entering Freshmen or with advanced standing, contingent upon their meeting the entrance requirements.

Servicemen who apply for admission should submit a brief statement of their previous educational background, including the name and location of schools they have attended. Veterans who wish to support their application with supplementary information as to their academic competence and mental proficiency, may arrange to take the General Educational Development Test through the facilities of the U. S. Armed Forces Institute. The GED Test may not be offered in place of the CEEB Aptitude Tests, nor a State High School Equivalency Certificate, for an official four-year high school transcript.

Veterans applying for admission to the Freshman class should write to the Dean of Admissions.

## Quantitative Admission Requirements

Students approved for admission to the Freshman Class are selected from applicants who are graduates of approved secondary schools and who offer sufficient credits to satisfy the minimum admission requirements of fifteen entrance units in approved subjects.

All units submitted to satisfy entrance requirements must be recognized by the secondary school as credits towards graduation in a college preparatory course. Commercial, vocational or industrial subjects will not be accepted as entrance units. Candidates for admission may submit entrance units in the following subjects:—

English .....	4 Units
Mathematics .....	2.5 Units
History .....	1 Unit
Modern Language .....	2 Units

Applicants for the Bachelor of Arts degree must offer in addition at least 3 Units in Latin. Other Units may be made up from additional Units in the above subjects or in other High School subjects, excluding commercial or manual training courses.

## UNIT REQUIREMENTS FOR THE VARIOUS COURSES

To be eligible to enroll for any one of the several courses included in the curriculum a specified number of units in required subjects must be offered. Elective subjects, sufficient to bring the total to 15 units, will be accepted but these additional units must be included in the list of approved subjects. The following table summarizes the required and elective units to be offered by candidates for the various degrees:

	A.B. (Greek)	A.B. (Math)	B.S. (Biol.)	B.S. (Chem. Math. Physics)	B.S. (Other)
Latin	3-4	3-4			
English	4	4	4	4	4
Math	2	3-5	3	3-5	2
History	1	2	1	1	1
*M.L. (Recommended)	2	2	2	2	2
Greek or Electives	1-5	1-5	1-5	1-5	1-5
Science			1	1	1

\*No credit will be allowed for a single year of a foreign language. Candidates who present no secondary school credit in a modern foreign language must register in one or other of the elementary courses offered in modern foreign languages and continue their study of the language chosen throughout sophomore year. A comprehensive examination will be given at the completion of the sophomore year language course. Those who fail to satisfy the reading requirements must continue their study of the language in junior year. German, either elementary or intermediate or advanced, is the prescribed modern foreign language for students in the Chemistry curriculum.

# Academic Information

## THE COLLEGE YEAR

The College Year begins on the third Tuesday of September and ends on the second Wednesday of June, with recess periods at Christmas and Easter.

It is constituted of two semesters of sixteen weeks each.

## CREDIT HOURS

A semester hour represents a course which meets once a week throughout the semester. In ordinary lecture courses, the class period is of fifty minutes duration; in cases in which the class period is conducted in the style of a conference or seminar, the period is longer or a greater number of them is required to give an equivalent number of credits; in all laboratory work, the length of a period required to give a semester hour credit is twice the length of the ordinary lecture period.

## CLASS HOURS

There are eight class periods each day, Monday through Friday. Class or laboratory periods begin at 8:40 A.M. and continue to 5:30 P.M., with an hour at noon for lunch period.

The morning class periods are from 8:40 A.M. to 12:30 P.M.; the afternoon periods from 1:40 P.M. to 5:30 P.M.

## ATTENDANCE AT COLLEGE EXERCISES

Students are required to be diligent in the pursuit of their studies and regular in their attendance of classes. Those who fail to meet these requirements will be requested to withdraw.

Each student must attend all of the classes in which he is enrolled, including elective lectures on subjects intimately connected with classroom study, and all chapel exercises. Absence from Class Exercises will be tolerated only in the event of illness, representation of the College in a major extra-curricular activity, family obligations.

Cumulative absences for any reason from Class Exercises totaling more than 15 per cent in any regular course of instruction will result in loss of academic credit for the course and the necessity of repeating that course.

Permission for make-up tests, examinations, and academic obligations unfulfilled because of involuntary absence will be granted by the Dean of Studies only. Such tests and examinations must be accomplished within 2

weeks after return to classes. The Charge for semester make-up examinations will be \$5.00.

Absence from class on the eve of major holidays will be construed as a voluntary absence and will reduce the percentage of permitted involuntary absences (cf. above) to 10 per cent.

Absence from class functions will be reported daily by Instructors to the Office of the Dean of Men.

A student who is repeatedly absent from classes will be required by the Dean of Studies to furnish proof of academic proficiency.

Students who are late for class will be reported to the Dean of Men for disciplinary action.

Only in extraordinary cases will exemption from these regulations be granted.

#### GRADING SYSTEM (Classes of 1960, '61 and '62)

A student's standing will be determined by the results of examinations, classroom work and assignments. The quality of the student's work will be graded as follows:

A—Outstanding; an unusual degree of scholarly initiative. B+—Superior work; eligibility for Honors Program. B—Intelligent application and grasp of subject matter. C+—Lowest recommendation grade for graduate work. C—Quality of work done by majority of students. D—Mastery of the minimum of subject matter. F—Failure. Course must be repeated. FA—Failure because of excessive absence. W—Official withdrawal. WF—Withdrawal while failing. WP—Withdrawal while passing. I—Incomplete. Incomplete grade may be removed with approval of the Dean by submission of work not later than one week after the final examination in the Course.

Absence from Final Examination—approval of Dean is necessary for deferred examination.

Reports of academic grades are sent to parents at the end of each semester.

Dean's List: First Honors—cumulative average of A

Second Honors—cumulative average of B

A grade of C or less disqualifies for honors.

The grade of C+ is the minimum Recommendation Grade, i.e. a cumulative



average of at least C<sup>+</sup> for all subjects in Senior year is required for recommendation by the Dean of Studies to a Professional or Graduate School. For a recommendation to certain Professional or Graduate Schools a grade of B may be required.

A semester grade of D is a Passing Grade.

A semester grade of F is a Deficient Failure Grade. A student who fails to attain a semester average of D in any course is deficient in that course and, to attain credit for it, he must repeat the course.

These regulations respecting semester examinations and semester grades apply also to treatise examinations in Philosophy.

#### REQUIREMENTS FOR ADVANCEMENT

The quantitative requirements of the curriculum for which the student is registered must be met each year. Course failures or deficiencies must be made up in an approved summer school. Credit for such a course will not be granted unless prior consent of the Dean has been given.

#### ACADEMIC PROBATION

1. Students to whom official warning has been given during a semester that their academic record in any course is unsatisfactory, will be considered to be "on probation."
2. A student who acquires a deficiency in any course during a semester is considered to be "on probation."
3. Students "on probation" will not be allowed to participate in extra-curricular activities and will forfeit off-campus privilege during the period of probation.

#### ACADEMIC FAILURE

Students who come under the following classifications will be considered to be academically unsatisfactory and will be asked to withdraw from the College:

1. A student who at the end of a semester is "deficient" in three or more courses.
2. A student who is "deficient" in three or more subjects at the end of an academic year.

3. A student who during his college course has accumulated an excessive number of deficient failures, even if these have been removed by attendance at Summer School.

In cases not covered by the foregoing, the Committee on Academic Standing has the authority to rule for the better interests of the College and the educational progress of the student.

### CONDITIONAL FAILURE

Freshmen who present satisfactory work in any course during the semester but fail the final examination will be allowed a re-examination on the recommendation of the Instructor. The highest grade for the course after the examination will be a passing grade. By failure in this second examination the Freshman incurs a deficiency.

### CREDIT FOR SUMMER SESSION WORK

The approval of the Dean of Studies is requisite to gain credit for work done in summer school at another college. Summer School courses must be passed with a grade of C or better to be recognized by the College as degree credits.

### EXTRA COURSES

A student in either Sophomore or Freshman class is not permitted to carry a greater number of hours than the normal number required in his course. Upperclassmen with a general average of B or over may, with the approval of the Dean, register for an extra course.

### CURRICULUM CHANGES

Ordinarily the student must follow the program of the curriculum under which he is registered. If a change of course within a curriculum is advisable, this may be accomplished with approval of the Chairman of the Department affected and the written permission of the Dean.

*Request for Change Form* may be obtained at the Registrar's Office.

Transfer of Student from one curriculum to another may be authorized by the Dean provided:

1. The proposed change will better suit the abilities and aptitude of the student, and
2. The student recognizes that he must complete all requirements of the curriculum he will register for, and

3. He secures parental permission (if a minor) and approval of Chairmen of Departments affected.

*Request for Change Form* may be obtained at the Registrar's Office.

In no case may a change of course or curriculum be accomplished after the third week of instruction.

#### WITHDRAWAL FROM A COURSE

Students who wish to withdraw from a course must have the approval of the Instructor and the Dean. *The Form for Withdrawal* may be obtained at the Registrar's Office.

Students withdrawing from a course during the first three weeks with the necessary approvals will be recorded as "W" (Withdrawn). After the third week permanent records of students withdrawing will carry "WF" (Failing), or "WP" (Passing). The estimate will be made by the Instructor. Withdrawal after the 10th week of course will be recorded as "WF" (Failing).

#### TRANSCRIPTS OF COLLEGE RECORD

Each student is entitled, on leaving the College, to a transcript of his record free of charge if his financial obligations to the College have been fulfilled. For additional transcripts a fee of one dollar each will be charged.

No transcripts will be issued during the periods of Commencement, Registration and Examinations.

#### FOREIGN STUDY

In the Junior year students who have achieved B+ academic work have the option of studying in Europe or remaining at Holy Cross. If the student elects to study in Europe, and is approved by the Faculty Committee on Fellowships, he must follow a course of study at an approved University. Applications for approval will be made at the Office of Student Personnel.

#### VOLUNTARY WITHDRAWAL FROM COLLEGE

A student who withdraws voluntarily from the College is entitled to honorable dismissal under the following conditions:

1. He must be in good standing on the records of the College, i.e., not liable to dismissal on account of failures, excessive absence, or breach of discipline.
2. He must return all College property.

3. All financial indebtedness must be settled with the College.
4. He must give proper notification to the Dean of his intentions to withdraw from the College.

#### GRADING SYSTEM, ETC. (Class of 1963)

Grade points determine the student's general average and measure the quality of the student's work as credit hours measure the quantitative requirements.

The grade "A" is assigned 4.0 points for each credit hour completed.

The grade "B+" is assigned 3.5 points for each credit hour completed.

The grade "B" is assigned 3.0 points for each credit hour completed.

The grade "C+" is assigned 2.5 points for each credit hour completed.

The grade "C" is assigned 2.0 points for each credit hour completed.

The grade "D" is assigned 1.0 points for each credit hour completed.

The grade "F", "FA", "WF" is assigned 0. for each credit hour.

#### HONOR GRADES

The following criteria determine honor grades:

##### GRADUATION HONORS

<i>Summa Cum Laude:</i>	Cumulative average of 3.87 or above
<i>Magna Cum Laude:</i>	Cumulative average of 3.70-3.86
<i>Cum Laude:</i>	Cumulative average of 3.50-3.69

#### DEAN'S LIST

<i>First Honors:</i>	A non-cumulative average of 3.7 or above
<i>Second Honors:</i>	A non-cumulative average of 3.5-3.69

### REQUIREMENTS FOR GOOD STANDING

#### FRESHMAN YEAR

Any student whose quality point average at the end of the first semester is below 1.5 will be on probation for the second semester.

Any student not having at least 1.0 at the end of the second semester will be dismissed.

Any student having 1.0 or more but less than 1.5 will be on probation for the first semester of the second year. A student who has a cumulative average of 1.5 or better at the end of the freshman year advances unconditionally.

#### **SOPHOMORE YEAR**

Students who do not attain a non-cumulative average of 1.75 at the end of the semester will be subject to dismissal or placed on probation at the discretion of the Committee on Academic Standing.

A student must have a cumulative average of 2.0 to advance unconditionally to junior year.

Any student with a cumulative average greater than 1.75 but less than 2.0 will be placed on probation for the first semester of junior year.

Any student with a cumulative average lower than 1.75 will be subject to dismissal.

#### **JUNIOR YEAR**

Students not attaining a cumulative average of 2.0 at the end of this semester will be subject to dismissal or placed on probation at the discretion of the Committee on Academic Standing.

Any student who does not have a cumulative average of 2.0 or better at the end of junior year will be subject to dismissal.

#### **SENIOR YEAR**

Students not attaining a cumulative average of 2.0 at the end of this semester will be placed on probation.

Students who do not have a cumulative average of 2.0 or better will not graduate.

# Requirements for Degrees

The College of the Holy Cross offers curricula leading to the degrees of Bachelor of Arts (B.A.), Bachelor of Science (B.S.) and Master of Science<sup>1</sup> (M.S. in Chemistry).

## BACHELOR OF ARTS DEGREE

This program is established to foster studies in the ancient classics. Holy Cross considers the program, based as it is on the principles of the *Ratio Studiorum*, a perfect instrument to develop fully and harmoniously the intellectual, moral and aesthetic powers of the student. Courses in Latin, Greek\*, English, Modern Language, History and Theology form the substance of the curriculum during the Freshman and Sophomore years. It should be noted that the student must have 2 or 3 units of Latin to be enrolled in this curriculum. In the Junior and Senior years the student may choose a field of concentration in preparation for graduate or professional school. Concomitantly with his studies in his major the student engages in courses in Philosophy, Ethics and Theology. Holy Cross requires these courses in the firm belief that they bring a maturing influence into the life of the student.

\*Modern Mathematics, as a liberal subject, may be offered in place of Greek.

## BACHELOR OF SCIENCE DEGREE

The program of studies leading to the Bachelor of Science Degree artfully balances training in the required subjects of English, Modern Mathematics, History, Modern Language, Philosophy, Psychology, Ethics, Theology, the Natural and Social Sciences. These liberal subjects are integrated with courses that satisfy the career interest of the student or prepare him for graduate school work in the area of his choice. In some curricula of this program the general educational development of the student is stressed in the Freshman and Sophomore years, when the student is enrolled in basic college courses in English, Mathematics, Modern Language, History, Theology, Social Science. In the Junior and Senior years the student engages in his major field of concentration concomitantly with courses in Philosophy, Ethics, and Theology. In other curricula of the program (B.S. Biology) courses in the field of career interest are taken simultaneously with the Liberal Arts subjects. Holy Cross believes that this program of studies and the curricular requirements offer a nicely articulated liberal education. (Cf. pp. 68-74).

<sup>1</sup> Cf. p. 136.

## ORAL EXAMINATIONS IN PHILOSOPHY

Partly because of the benefit derived from oral presentations and defense of a philosophical position or thesis and partly to test the ability of the student, by long established tradition all students are examined orally in Philosophy courses at the end of the Junior and Senior years. The Philosophy Department determines the length of the examinations and conducts the examinations to which members of all departments of the college are invited. The Philosophy examinations of Honors Program students is a public examination.

## ENGLISH COMPOSITION COURSE

Holy Cross College does not offer a course in English Composition. However, if a Freshman shows in class assignments that he needs further training and drill, he will be assigned to an English Composition Course for remedial work under the direction of a member of the English Department. Any student who shows need for this kind of instruction, regardless of the class in which he is enrolled, may be assigned to this course by any member of the Faculty.

## PUBLIC PRESENTATIONS

In May of each year professors from sister colleges are invited to examine certain qualified students publicly in Philosophy and in a chosen area of Greek studies. Students selected for these Public Presentations are excused from the end-of-course examinations in these subjects.

## HONORS

Gifted students enrolled in the curricula leading to the Bachelor's Degree in either the Arts or Sciences may be invited at the end of the Freshman year to participate in the Honors Program (cf. p. 53). The program creates the opportunity for self-education, originality and resourcefulness. Colloquia, which are conducted by the students under the direction of professors from the fields of the arts and the sciences, are cross-departmental and introduce the student to disciplines and content apart from his major field of interest. Each department adapts its honors program to its own discipline and the student penetrates more deeply into the required courses as well as the courses in which he has peculiar interest. During each semester of his Junior and Senior year the student must present a term paper which will be presented to his colleagues in the Program and defended by him. At the discretion of the department of major interest a thesis may be required at the end of the Senior year.

### PREPARATION FOR PROFESSIONAL STUDY

The college offers programs of study that will prepare the student for the professional schools of Medicine and Dentistry. These programs are carefully integrated with liberal subjects and lead to the degrees of Bachelor of Arts or Bachelor of Science. Students who wish to enroll in one of these should consult the Chairman of the Biology department.

The Department of Chemistry is approved by the Committee on Professional Training of the American Chemical Society for its curriculum leading to the Bachelor of Science Degree.

Holy Cross offers no special program of courses to prepare students for the study of the law. Students who wish to make such preparation are referred to their academic advisers.

### R.O.T.C. STUDENTS

Appropriate substitution in all programs is made for students enrolled in the Air Force and Naval R.O.T.C. Units.



# Curriculum Requirements

/ Honors and Non-Honors

## The Bachelor of Arts Degree

FRESHMAN				SOPHOMORE			
English			11, 12	English			21, 22
Theology			11, 12	Theology			21, 22
Modern Foreign Language			11, 12	Modern Foreign Language			23, 24
"	"	"	13, 14	"	"	"	25, 26
"	"	"	15, 16	"	"	"	27, 28
History			11, 12	Philosophy			21, 22
Latin			11, 12	Latin			21, 22
Greek			11, 12	Greek			21, 22
"			13, 14	"			25, 26
"			15, 16	Mathematics			21, 22
Mathematics			11, 12				
JUNIOR				SENIOR			
Philosophy			41, 42	Philosophy			51, 52
Theology			41, 42	"			53, 54
History			21, 22	"			55, 56
				Theology			51, 52
Elective Science <sup>1</sup>			41, 42				
Electives in Field <sup>2</sup>				Electives in Field			
Electives in Field				Electives in Field			

<sup>1</sup> To fulfill the science requirement of Junior Year, one of the following may be taken: Biology 41, 42; Chemistry 41, 42; Physics 41, 42; Physics 43, 44.

<sup>2</sup> Elective courses may be chosen from one of the following fields: English, Classical Languages, Romance Languages, German, History, Economics, Education, Political Science, Sociology, Mathematics and the Natural Sciences. At least 8 courses must be completed in the major field in the Junior and Senior Year.

## Pre-Medical & Pre-Dental

FRESHMAN			SOPHOMORE		
English	11, 12		English	21, 22	
Theology	11, 12		Theology	21, 22	
Modern Foreign Language	11, 12		Modern Foreign Language	23, 24	
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"
Chemistry	15, 16		Chemistry	25, 26	
Latin	11, 12		Latin	21, 22	
Greek	11, 12		Philosophy	21, 22	
"	15, 16				
Mathematics	11, 12				

JUNIOR			SENIOR		
Philosophy	41, 42		Philosophy	51, 52	
Theology	41, 42		"	53, 54	
Elective			"	55, 56	
			Theology	51, 52	
History	25, 26		Biology	65, 66	
Biology	55, 56		Chemistry	65, 66	
Physics	45, 46				

## The Bachelor of Science Degree

### A. BIOLOGY

FRESHMAN			SOPHOMORE		
English	11, 12		English	21, 22	
Theology	11, 12		Theology	21, 22	
Modern Foreign Language	11, 12		Modern Foreign Language	23, 24	
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"
Mathematics	15, 16		Philosophy	21, 22	
Biology	11, 12		Biology	21, 22	
Chemistry	15, 16		Chemistry	25, 26	
JUNIOR			SENIOR		
Philosophy	41, 42		Philosophy	51, 52	
Theology	41, 42		"	53, 54	
History	25, 26		"	55, 56	
			Theology	51, 52	
Biology	51, 52		Biology	61, 62	
"	58				
Physics	45, 46		Chemistry	65, 66	

## B. CHEMISTRY \*

FRESHMAN		SOPHOMORE	
English	11, 12	English	21, 22
Theology	11, 12	Theology	21, 22
†Modern Foreign Language	11, 12	†Modern Foreign Language	23, 24
" " "	13, 14	" " "	27, 28
" " "	15, 16		
Mathematics	11, 12	Mathematics	21, 22
Chemistry	11, 12	Philosophy	21, 22
"	13, 14		
Physics	15, 16	Chemistry	21, 22
JUNIOR		SENIOR	
Philosophy	41, 42	Philosophy	51, 52
Theology	41, 42	"	53, 54
History	25, 26	"	55, 56
		Theology	51, 52
Chemistry	51, 52	Chemistry	57, 58
"	56	"	61, 62
Physics	51		

† German is required for those who desire certification by the American Chemical Society.

\* Chemistry Department requires experimental thesis.

## C. MATHEMATICS

FRESHMAN		SOPHOMORE	
English	11, 12	English	21, 22
Theology	11, 12	Theology	21, 22
Modern Foreign Language	11, 12	Modern Foreign Language	23, 24
" " "	13, 14	" " "	25, 26
" " "	15, 16	" " "	27, 28
Mathematics	11, 12	Mathematics	21, 22
English	27, 28	Philosophy	21, 22
Physics	15, 16	History	25, 26
JUNIOR		SENIOR	
Philosophy	41, 42	Philosophy	51, 52
Theology	41, 42	"	53, 54
		"	55, 56
		Theology	51, 52
Mathematics	41, 42	Mathematics	51, 52
Mathematics	45, 46	Mathematics	53, 54
		"	55, 56
Electives*		Mathematics	65, 66

\* Mathematics Department requires 4 courses in the Social Sciences.

## D. PHYSICS

FRESHMAN			SOPHOMORE		
English	11, 12		English	21, 22	
Theology	11, 12		Theology	21, 22	
Modern Foreign Language	11, 12		Modern Foreign Language	23, 24	
"	13, 14	"	"	25, 26	"
"	15, 16	"	"	27, 28	"
Mathematics	11, 12		Mathematics	21, 22	
Chemistry	15, 16		Philosophy	21, 22	
Physics	11, 12		Physics	21, 22	
JUNIOR			SENIOR		
Philosophy	41, 42		Philosophy	51, 52	
Theology	41, 42		"	53, 54	
History	25, 26		"	55, 56	
			Theology	51, 52	
Mathematics	41, 42		Physics	61, 62	
Physics	51, 52		Physics	65, 66	
"	55, 56				

## E. BUSINESS ADMINISTRATION

### I. Accounting

FRESHMAN			SOPHOMORE		
English	11, 12		English	21, 22	
Theology	11, 12		Theology	21, 22	
Modern Foreign Language	11, 12		Modern Foreign Language	23, 24	
"	13, 14	"	"	25, 26	"
"	15, 16	"	"	27, 28	"
Mathematics	15, 16		Philosophy	21, 22	
Economics	11, 12		Economics	21	
Economics	15, 16		Economics	31, 32	
			Economics	35, 36	
JUNIOR			SENIOR		
Philosophy	41, 42		Philosophy	51, 52	
Theology	41, 42		"	53, 54	
History	25, 26		"	55, 56	
			Theology	51, 52	
Economics	51, 52		Economics	57, 58	
Economics	59		"	63, 64	
"	53, 98				
Economics	47, 48		Economics	65, 66	
Economics	61, 62		Economics	67	

## II. Economics

FRESHMAN				SOPHOMORE			
English			11, 12	English			21, 22
Theology			11, 12	Theology			21, 22
Modern Foreign Language			11, 12	Modern Foreign Language			23, 24
"	"	"	13, 14	"	"	"	25, 26
"	"	"	15, 16	"	"	"	27, 28
Mathematics			15, 16	Philosophy			21, 22
Economics			11, 12	Economics			21
Economics			15, 16	Economics			23, 25
				Economics			26
JUNIOR				SENIOR			
Philosophy			41, 42	Philosophy			51, 52
Theology			41, 42	"			53, 54
History			25, 26	"			55, 56
				Theology			51, 52
Economics			51, 52	Economics			55, 56
"			53				
Economics			71, 72	Economics			75, 76
Economics			49	Economics			78, 73

## III. Industrial Relations

FRESHMAN				SOPHOMORE			
English			11, 12	English			21, 22
Theology			11, 12	Theology			21, 22
Modern Foreign Language			11, 12	Modern Foreign Language			23, 24
"	"	"	13, 14	"	"	"	25, 26
"	"	"	15, 16	"	"	"	27, 28
Mathematics			15, 16	Philosophy			21, 22
Economics			11, 12	Economics			21
Economics			15, 16	Economics			23, 26
				Economics			25
JUNIOR				SENIOR			
Philosophy			41, 42	Philosophy			51, 52
Theology			41, 42	"			53, 54
History			25, 26	"			55, 56
				Theology			51, 52
Economics			51, 52	Economics			55, 56
"			53, 49				
Economics			91	Economics			75, 76
Economics			93	Economics			95, 96

#### IV. Marketing

FRESHMAN			SOPHOMORE		
English	11, 12		English	21, 22	
Theology	11, 12		Theology	21, 22	
Modern Foreign Language	11, 12		Modern Foreign Language	23, 24	
"	"	"	"	"	"
"	"	"	"	"	"
	13, 14			25, 26	
	15, 16			27, 28	
Mathematics	15, 16		Philosophy	21, 22	
Economics	11, 12		Economics	21	
Economics	15, 16		Economics	23, 26	
			Economics	25	
JUNIOR			SENIOR		
Philosophy	41, 42		Philosophy	51, 52	
Theology	41, 42		"	53, 54	
History	25, 26		"	55, 56	
			Theology	51, 52	
Economics	51, 52		Economics	55, 56	
"	53				
Economics	81, 82		Economics	85, 86	
Economics	49		Economics	78, 93	

#### F. EDUCATION

FRESHMAN			SOPHOMORE		
English	11, 12		English	21, 22	
Theology	11, 12		Theology	21, 22	
Modern Foreign Language	11, 12		Modern Foreign Language	23, 24	
"	"	"	"	"	"
"	"	"	"	"	"
	13, 14			25, 26	
	15, 16			27, 28	
History	11, 12		History	21, 22	
Mathematics	15, 16		Philosophy	21, 22	
Education	11, 14		Education	21, 22	
JUNIOR			SENIOR		
Philosophy	41, 42		Philosophy	51, 52	
Theology	41, 42		"	53, 54	
			"	55, 56	
			Theology	51, 52	
Elective Science	41, 42		Education	51, 52	
Education	55, 61		(Alt.) Electives in Field		
Electives in Field (4 courses)			(Alt.) Electives in Field		
			Practice Teaching		

## G. ENGLISH

FRESHMAN				SOPHOMORE			
English			11, 12	English			21, 22
Theology			11, 12	Theology			21, 22
Modern Foreign Language			11, 12	Modern Foreign Language			23, 24
"	"	"	13, 14	"	"	"	25, 26
"	"	"	15, 16	"	"	"	27, 28
History			11, 12	History			21, 22
Mathematics			15, 16	Philosophy			21, 22
Classics Translation			27, 28	History of English Language			91, 92
JUNIOR				SENIOR			
Philosophy			41, 42	Philosophy			51, 52
Theology			41, 42	"			53, 54
				"			55, 56
				Theology			51, 52
Elective Science			41, 42	Electives in Field			
Electives (4 courses)				Electives in Field			
Electives (2 courses, social sciences)							

## H. GENERAL

(Economics, History, Political Science, Sociology)

FRESHMAN				SOPHOMORE			
English			11, 12	English			21, 22
Theology			11, 12	Theology			21, 22
Modern Foreign Language			11, 12	Modern Foreign Language			23, 24
"	"	"	13, 14	"	"	"	25, 26
"	"	"	15, 16	"	"	"	27, 28
History			11, 12	History			21, 22
Mathematics			15, 16	Philosophy			21, 22
Economics			11, 12	Political Science			11, 12
JUNIOR				SENIOR			
Philosophy			41, 42	Philosophy			51, 52
Theology			41, 42	"			53, 54
Sociology			11, 12	"			55, 56
				Theology			51, 52
Elective Science			41, 42	Electives in Field			
Electives in Field				Electives in Field			
Electives in Field							

To fulfill the science requirement of Junior Year, one of the following may be taken: Biology 41, 42, Chemistry 41, 42, Physics 41, 42 or 43, 44.





# Course Numbering

Course numbers were changed on 1 August 1958. Old numbering system will be found in column on left. New numbers will be found in column on right. Odd numbers refer to first semester, even numbers to second semester courses.

## ACCOUNTING AND ECONOMICS

### FRESHMAN

5.1, 2	11, 12	Principles of Economics
6.1, 2	15, 16	Elementary Accounting

### SOPHOMORE

22	21	Economic History of U.S.
8	23	Economic Geography
23	25	Adv. Int. Eco. Analysis
66	26	Economic Theory
33.1, 2	31, 32	Intermediate Accounting
79.1, 2	35, 36	Business Law (Acctg. Maj.)

### JUNIOR AND SENIOR

5.1, 2	41, 42	Principles of Economics
6.1, 2	43, 44	Elementary Accounting
33.1, 2	45, 46	Intermediate Accounting
79.3, 4	47, 48	Business Law (Acctg. Maj.)
45	49	Intro. to Industrial Relations
62	51	Corporation Finance)
43	52	Business Statistics)

41	53	Money and Banking)
78.1, 2	55, 56	Business Law (Non-Acctg. Maj.)
	57	Investments
	58	Public Finance
	59	Advanced Corporation Finance
50.1, 2	61, 62	Cost Accounting
58.1, 2	63, 64	Auditing
59.1, 2	65, 66	Federal Income Tax
60.1, 2	67	Advanced Accounting
64	71	History of Economic Thought
46	72	Modern Economic Theories
47	73	Comparative Economic Systems
80.1, 2	75, 76	Govt. and Economic Life
95	77	Pro-Seminar Economic Order
67	78	Internat. Trade and Finance
56	81	Prin. of Marketing
96	82	Retail Distribution
97	85	Sales Management
99	86	Prin. of Advertising
94	91	Social and Labor Legislation
98	93	Personnel Administration
90.1, 2	95, 96	Collective Bargaining
74	98	Business Management

## AIR SCIENCE

### FRESHMAN

101, 102 11, 12 Foundations of Air Power I

### SOPHOMORE

201, 202 21, 22 Foundations of Air Power II

### JUNIOR

301, 302 41, 42 Leadership Prin. and Practices

### SENIOR

401, 402 51, 52 Global Relations

## BIOLOGY

### FRESHMAN

1 11 General Botany

2 12 General Zoology  
(Fresh. B.S. Biol.)

### SOPHOMORE

61 21 Vertebrate Embryology  
(Soph. B.S. Biol.)

41 22 Comparative Anatomy

### JUNIOR

43.1, 2 41, 42 General Biology (Jun. Elec.)

44 51 Mammalian Anatomy  
(Jun. B.S. Biol.)

Vertebrate Histology  
(Jun. B.S. Biol.)

General Zoology  
(Jun. A.B. Pre-Med.)

Mammalian Anatomy  
(Jun. A.B. Pre-Med.)

Microtechnique  
(Jun. B.S. Biol.)

### SENIOR

31 61 Genetics

35 62 General Physiology

62 65 Vertebrate Histology  
(Sen. A.B. Pre-Med.)

61 66 Vertebrate Embryology  
(Sen. A.B. Pre-Med.)

63 67 Microtechnique

## CHEMISTRY

### FRESHMAN

13.1, 2 11, 12 Gen. Inorganic Chemistry  
(Fresh. Chem. Majors)

12 13, 14 Chemical Problems

11.1, 2 15, 16 Gen. Inorganic Chemistry  
(Fresh. Science Majors)

(Fresh. Pre-Med. A.B.  
& B.S.)

### SOPHOMORE

21.1, 2 21, 22 Analytical Chemistry

## CHEMISTRY (Con't.)

31	25	Qualitative Analysis
32	26	Quantitative Analysis
<b>JUNIOR</b>		
41.1, 2	41, 42	Gen. Chemistry (Jun. Elec.)
33.	46	Glass Practice
61.1, 2	51, 52	Organic Chemistry (Jun. B.S. Chemistry)
51.1	56	Physical Chemistry I
<b>SENIOR</b>		
51.2, 3	57, 58	Physical Chem. II & III
52.1, 2	61, 62	Advanced Organic Chem.
61.1, 2	65, 66	Organic Chemistry (Sen. Pre-Med. A.B. & B.S.)
	67	Chemistry Seminar

## CLASSICS GREEK

### FRESHMAN AND SOPHOMORE

1, 2	11, 12	Elementary Greek
	13, 14	Intermediate Greek
5, 6	15, 16	Advanced Greek
17, 18	21, 22	Intermediate Greek
39, 40	25, 26	Advanced Greek

### JUNIOR AND SENIOR

63.1, 2	51, 52	Homer 'Iliad' and Odyssey'
70.1, 2	55, 56	The Drama of Euripides

61, 62	The Dialogues of Plato
63, 64	Herodotus
65	The 'Poetics' of Aristotle
66	'Nicomachean Ethics' Arist.
73.1, 2	'Histories' of Thucydides
65.1, 2	4th Cent. Christian Texts

## LATIN

### FRESHMAN AND SOPHOMORE

1	11	Cicero; Virgil; Catullus
2	12	Horace; Livy
1-A, 2-A	15, 16	Intermediate Latin
21	21	Cicero; Tacitus
22	22	Cicero; Horace, Juvenal

### JUNIOR AND SENIOR

51	Latin Lit. Early Middle Ages
52	Latin Lit. Later Middle Ages
55, 56	Medieval Latin Lyrics
61, 62	Classic. Infl. on Eng. Lit.
63	Virgil
64	Roman Comedy

## EDUCATION

### FRESHMAN

1	11	History of Education
	12	Curriculum Development
32	14	History of Education in U.S.

### SOPHOMORE

70	21	Educational Statistics
	22	Tests and Measurements

## EDUCATION (Con't.)

### JUNIOR

31	51	Secondary School Methods
64	52	Philosophy of Education

### SENIOR

51	55	Educational Psychology
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### JUNIOR AND SENIOR

71	61	Adolescent Psychology
52	62	Principles of Guidance
	71	Reading in the Secondary Schools
	72	Teaching Observation and Practice

## ENGLISH

### FRESHMAN AND SOPHOMORE

3.1, 2	11, 12	Poetry and Prose
22.1, 2	21, 22	Rhetoric
	25, 26	Survey of Eng. Lit.
	27, 28	Classics in Translation

### JUNIOR AND SENIOR

80.1	45	Chaucer
	46	Middle English
	51	Eng. Lit. of 16th Cent.
75.1, 2	55, 56	Shakespeare
	57	Tudor and Stuart Drama
	61	Early 17th Cent. Eng. Lit.

39.1	62	Milton
	65	Dryden; Pope, Swift
	66	The Age of Johnson
40	71	Eng. Poetry, 19th Cent.
62	74	Novel in 18th and 19th Cent.
61.1, 2	75, 76	Victorian Literature
63	83	19th Cent. American Lit.
69	84	20th Cent. American Lit.
	91, 92	History of the Language
83	93	Introduction to Criticism
	96	Seminar Bibliogr. and Method
	99	Honors Reading

## FINE ARTS

1.1, 2	51, 52	Art Apprec. & History I & II
2.1, 2	53, 54	Art Apprec. & Hist. III & IV
	55, 56	Survey Art Apprec. & History
3.1, 2	61, 62	Appreciation of Music
4.1, 2	65, 66	Harmony
10.1, 2	71, 72	Studio Painting & Drawing

## HISTORY AND POLITICAL SCIENCE

### HISTORY

#### FRESHMAN AND SOPHOMORE

2.1	11	European Hist. to 900
212	12	European Hist. 900-1648
22.1	21	European Hist. 1648-1815
22.2	22	European Hist. 1815
3.1, 2	25, 26	Survey West. Civiliz. to 1648 and since 1648

## HISTORY (Con't.)

### JUNIOR AND SENIOR

3.1, 2	41, 42	Survey West. Civiliz. to 1648 and since 1648
4	43	(Jun. A.B. Pre-Med.)
15, 16	46, 47	Historical Methodology
		Hist. of U.S. to 1865 and since 1865
17	48	U. S. Hist. in 20th Cent.
66.1, 2	51, 52	Diplomatic Hist. of U.S.
18	55	Economic Hist. of U.S.
51	61	Hist. of Tudor England
52	62	Hist. of Stuart England
62.1, 2	65, 66	Europe in the 19th Cent.
65.1, 2	67, 68	Europe since 1914
67.1, 2	71, 72	Hist. of Latin America
71.1, 2	73, 74	Far East in Modern Times
74.1, 2	77, 78	Hist. of Russia
73	81	Reading Course Hist. & Govt.
72	83	Pro-Seminar in History

## POLITICAL SCIENCE

### FRESHMAN AND SOPHOMORE

11.1, 2	11, 12	Intro. Political Science
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### JUNIOR AND SENIOR

12.1, 2	41, 42	American Government
42.1, 2	45, 46	International Relations
43.1, 2	51, 52	Diplomatic Hist. of U.S.
31	55	Constit. & Leg. Hist. England

21.1, 2	57, 58	Hist of Political Thought
23	61	American Political Parties
51	62	Public Administration
32.1, 2	65, 66	Constit. Hist. of U.S.
44	68	Inter-American Problems
24	71	The U.S.S.R.
22.1, 2	73, 74	Comparat. Modern Govts.
52.1, 2	75, 76	Govt. & Economic Life
61	83	Pro-Seminar Polit. Science

## MATHEMATICS

### FRESHMAN

13.1, 2	11, 12	Prin. of Modern Mathematics
17	15	Introductory Analysis
18	16	Elementary Stat. Analysis
2.1, 2	17, 18	Mathematics of Finance

### SOPHOMORE

23.1, 2	21, 22	Prin. of Modern Math.
		III & IV

### JUNIOR AND SENIOR

41.1, 2	41, 42	Advanced Calculus
55.1, 2	45, 46	Intr. Higher Geom. & Topol.
45.1, 2	51, 52	Intr. Abstract Algebra
65.1, 2	53, 54	Prin. of Analysis & Topol.
63.1, 2	55, 56	Theory of Probability
75.1, 2	61, 62	Special Topics
	65, 66	Mathematical Seminar

## MODERN FOREIGN LANGUAGES

### FRENCH

#### FRESHMAN

10.1, 2 11, 12 Elementary French  
15.1, 2 15, 16 French Intermediate A  
24.1, 2 15, 16 French Intermediate B

#### SOPHOMORE

15.1, 2 21, 22 French Advanced I A  
24.1, 2 21, 22 French Advanced I B  
32.1, 2 27, 28 Advanced French II

#### JUNIOR AND SENIOR

65.1, 2 41, 42 Develop. French Classicism  
45, 46 Age of Enlightenment in France  
51 Romanticism  
52 Realism  
55, 56 Survey of Theatre in France  
61, 62 French Lit. 1800 to Modern Times  
71, 72 French Conversat. & Composit.  
75, 76 Phonetics and Diction

### GERMAN

#### FRESHMAN

10.1, 2 11, 12 Elementary German  
15.1, 2 15, 16 German Intermediate A  
24.1, 2 15, 16 German Intermediate B

#### SOPHOMORE

15.1, 2 21, 22 German Advanced I A  
24.1, 2 21, 22 German Advanced I B  
32.1, 2 25, 26 Advanced German II

#### JUNIOR AND SENIOR

62 41, 42 German Literary Hist.  
45, 46 Goethe and Romanticism  
51, 52 Realism  
71, 72 German Conversat. and Composition

### ITALIAN

#### FRESHMAN AND SOPHOMORE

11, 12 Elementary Italian  
13, 14 Italian Intermediate I

### RUSSIAN

#### FRESHMAN AND SOPHOMORE

11, 12 Elementary Russian  
13, 14 Russian Intermediate

### SPANISH

#### FRESHMAN

10.1, 2 11, 12 Elementary Spanish  
15.1, 12 15, 16 Spanish Intermediate I A  
24.1, 2 15, 16 Spanish Intermediate I B

SOPHOMORE  
15.1, 2 21, 22  
24.1, 2 25, 26

Spanish Intermediate I  
Spanish Intermediate II

#### JUNIOR AND SENIOR

63.1, 2 41, 42  
Survey Spanish Lit. to 1700  
and since 1700  
51 Cervantes  
52 Drama of the Golden Age  
61, 62 Survey of Spanish Drama  
71, 72 Spanish Conversat. & Comp.

### NAVAL SCIENCE

#### FRESHMAN

101 11 Evolution of Sea Power  
102 12 Naval Orientation

#### SOPHOMORE

201 21 Naval Weapons  
202 22 General Psychology

#### JUNIOR

301 41 Naval Engineering  
302 42 Navigation  
301M 45 Evolution of Art of War  
302M 46 Mod. Basic Strat. & Tactics

#### SENIOR

401 51 Naval Operations

402 52  
401M 55  
402M 56

Naval Administration  
Amphibious Warfare  
Leadership; Military Justice

### PHILOSOPHY

#### JUNIOR

41 (41) Logic  
42 (42) Epistemology  
43 Ontology  
44 Cosmology

#### SENIOR

51 Natural Theology  
52 Fundamental Psychology  
53 Advanced Psychology  
55 General Ethics  
56 Special Ethics  
62.1, 2 History of Philosophy  
57, 58 Current Gen. Psych  
71, 72 The Human Brain  
73

### PHYSICS

#### FRESHMAN

1 11 Mechanics; Heat; Sound  
2 12 Electricity; Light  
(Fresh. Physics Majors)  
1 15 Mechanics; Heat; Sound  
2 16 Electricity; Light  
(Fresh. Science Majors)

#### SOPHOMORE

21 21 Geometr. & Physical Optics

## PHYSICS (Con't.)

45	22	Heat and Thermodynamics
1, 2	25, 26	General Physics (Soph. Nav. ROTC Reg.)
<b>JUNIOR AND SENIOR</b>		
41.1, 2	41, 42	General Physics (Jun. Elec.)
75	43	Introd. Astronomy " "
76	44	Introd. Geology " "
1, 2	45, 46	General Physics (Jun. A.B. Pre-Med.)
43.1	51	Electricity
		Jun. B.S. Physics
		Jun. B.S. Chem.
70.1	52	Atomic Physics I
60	55	Theoretical Mechanics
53	56	Electromagnetic Theory
52	61	Nuclear Physics
54	62	Electronics
43.2	65	Alternating Current Circuits
70.2	66	Atomic Physics II
32	73	Engineering Drawing
33	74	Descriptive Geometry
	75	Physics Seminar

## SOCIOLOGY

<b>FRESHMAN AND SOPHOMORE</b>		
31.1, 2	11, 12	Introd. Sociology (Fresh. B.S. English) (Fresh. B.S. General)

31.1, 2	21, 22	Introd. Sociology (Soph. B.S. Education)
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### JUNIOR AND SENIOR

31	41	Introd. Sociology
75.1, 2	51, 52	Social Research
73.1, 2	55, 56	Social Psychology
61	62	Contemp. Sociol. Theories
64	64	Industrial Sociology
65	65	American Minorities
66	66	The Family
67	67	Sociology of The City
70	71	Sociology of the U.S.S.R.
62	73	Social Stratification
74	74	Law and Society
60	76	Cultural Anthropology
	77	Social Research
	91, 92	Honors Reading

## THEOLOGY

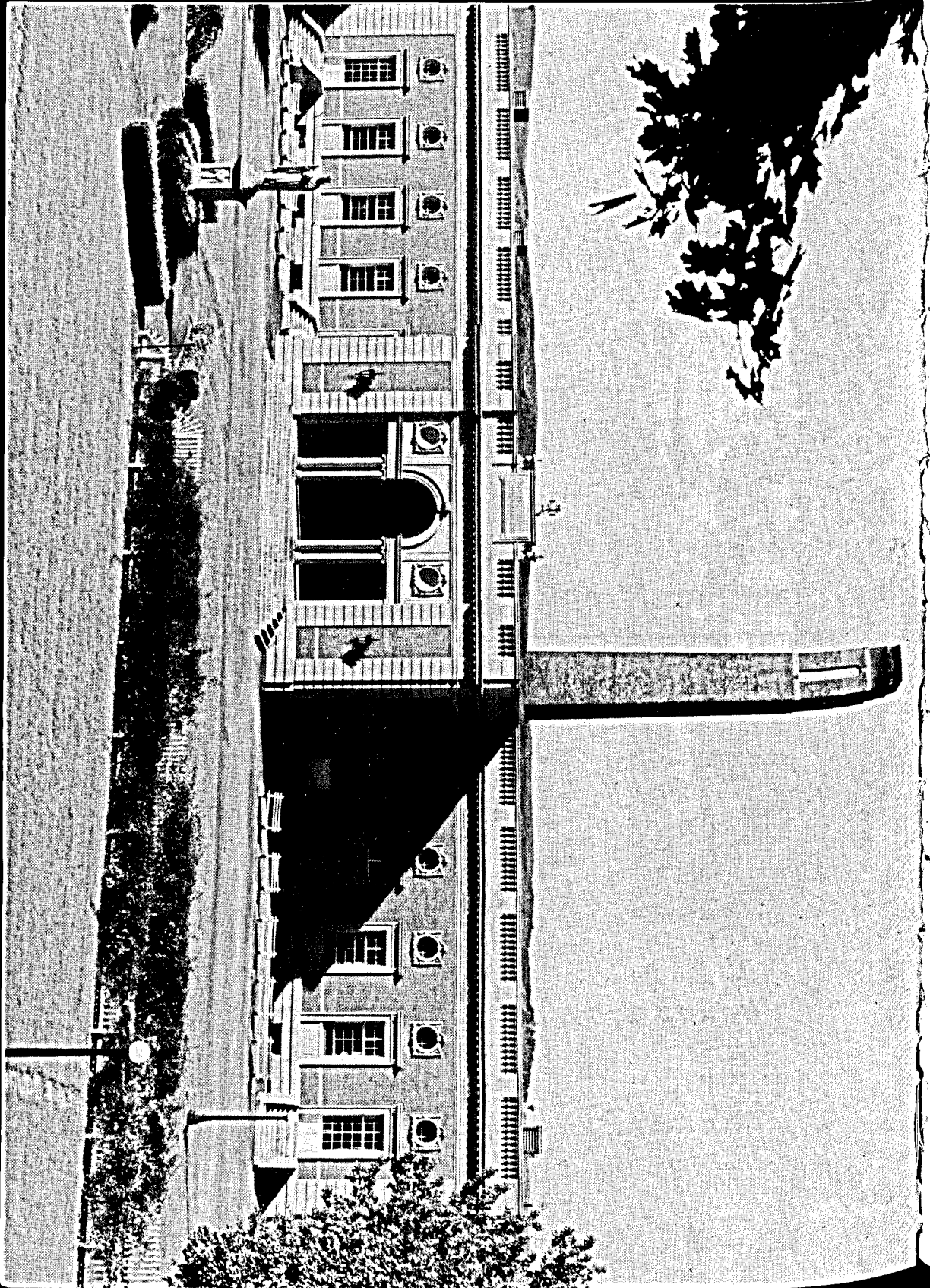
### FRESHMAN AND SOPHOMORE

10	11	The Life of Christ
11	12	Person, Mission, Church of Christ
20, 21	21, 22	Christ in His Members

### JUNIOR AND SENIOR

30	41	Christology; Soteriology
31	42	Fall of Man; Justification
40	51	The Act of Faith
41	52	Christian Churches





# Courses of Instruction

## DEPARTMENT OF

## Accounting and Economics

*Professors:* Peragallo, (Chairman), R. F. X. Cahill, B. W. McCarthy

*Associate Professors:* T. J. Cahill, Callaghan, Fenlon, R. J. Smith

*Assistant Professors:* O'Connell, Scola

*Instructors:* W. C. Crowley, D. A. King, McLaughlin, Powers, Saluti

The curriculum of the Department has been conceived with the one major objective of providing the student with as broad and well balanced an education as possible. Specialization is kept to a minimum. Course content is basically theoretical and aimed at developing the student's analytical and critical faculties, at stimulating his powers of interpretation, synthesis and understanding, and at training him to exact thinking. The emphasis is on the understanding of our economic system and on the analysis of its economic and business problems. The student is thus prepared to continue his education at the graduate level or to enter effectively into the business world. The curriculum is broadly integrated and in accordance with the Liberal Arts Tradition.

Major concentrations are given in Economics, Accounting, Marketing and Industrial Relations.

### **Economics 11, 12 (41, 42). Principles of Economics.**

A study of the basic institution and principles underlying the operation of the economic system. Particular attention is given to the factors of production, the laws of demand, supply and price, the conditions of pure and imperfect competition, monopoly, the laws of distribution, money and banking, interregional trade, government and business, business cycles, labor problems and comparative economic systems.

*Six credit hours.*

### **Economics 15, 16 (43, 44). Elementary Accounting.**

A study of the fundamental principles of accounting and of the theory upon which these principles are based. Topics covered include the steps in the accounting cycle leading to the preparation of the balance sheet and income statement, the valuation of current and fixed assets, accounting for payroll, and the special problems involved in partnership and corporation accounts. Two practice sets are done outside of class.

*Six credit hours.*

### **Economics 21. Economic History of the United States.**

Economic development from colonial days to the present time including modern European developments that affect the United States; the principal industrial interests such as agriculture, mining, fishing, manufacturing and transportation, money and banking, and the problems of labor, immigration, tariff and world-wide commercial relations.

*Three credit hours.*

### **Economics 23. Economic Geography: World Industries and Resources.**

The purpose of this course is to analyze the regional distribution of world industrial activities. A study is made of the distribution and comparative importance of manufacturing, mining, forestry and agriculture in relation to such factors as power resources, raw materials, climate, land-forms, and centers of population.

*Three credit hours.*

**Economics 25.**  
**Intermediate Economic Analysis**

Institutional backgrounds of price determination; consumer demand; sales schedules; monopolistic competition; average cost pricing; factor prices; national income; survey of welfare economics. Prerequisite: Principles of economics. *Three credit hours.*

**Economics 26.**  
**Advanced Economic Theory**

The geometry of the modern theory of demand—the theory of utility; production functions; competitive pricing; the theory of monopoly; the theory of oligopoly; cartels and unions. Basically a micro-economic analysis, this course will also study policy making and evaluate it in the light of current economic criticism and analysis. Prerequisite:—Intermediate Economic Analysis. *Three credit hours.*

**Economics 31, 32 (45, 46)**  
**Intermediate Accounting.**

This course provides instruction in corporation accounting with special emphasis on the preparation and interpretation of corporate financial statements. A thorough study of the balance sheet is made from the viewpoint of content and proper valuation procedures, with special emphasis on pertinent American Institute of Accounting Bulletins. Statements are analyzed by means of horizontal and vertical analysis and through ratio analysis. Training is also given in the preparation of statements from incomplete data, and in the preparation of the statement of application of funds.

*Six credit hours.*

**Economics 35, 36.**  
**Business Law.**

Required of all students majoring in Accounting. The course includes contracts, agency, sales and negotiable instruments. The course is intended to correlate the accounting and legal aspects in reference to common business transactions.

*Four credit hours.*

**Economics 47, 48.**  
**Business Law.**

A continuation of Business Law. Eco. 35, 36. The course includes a study of legal aspects of Partnerships and corporations; personal property, real property, insurance, trade regulations and business torts.

*Four credit hours.*

**Economics 49**  
**Introduction to Industrial Relations.**

The purpose of this course is to survey the entire field of industrial relations including the development of unions, the place of collective bargaining in our present economic structure and the problems of labor as they have evolved out of this economic society. The efforts at the solution of these problems by labor unions, employers and the government will be analyzed. Prerequisite: Eco. 25 or 26.

*Three credit hours.*

**Economics 51.**  
**Corporation Finance.**

After first considering the corporation vis-à-vis other forms of business organization this course treats of the organization and control of corporations, alternative methods of financing both long-term and short-term requirements for funds, characteristic financial policies and structures of important industry groups, and the role of the promoter and of the investment banker in business finance. Attention is also given to the preparation of cash budgets and the analysis of financial statements. Prerequisite: Eco. 11, 12.

*Three credit hours*

**Economics 52.**  
**Business Statistics.**

An introduction to basic concepts and applications of statistics, with emphasis on a description of frequency distributions (averages, dispersion, etc.), and an introduction to statistical inference, time series, index numbers, and simple correlation. Emphasis is on practical application. The course is not intended for students who take college mathematics through calculus. Prerequisite: Eco. 12 and Math. 16.

**Economics 53.**  
**Money, Credit and Banking.**

The purpose of this course is to introduce the student to the general economic principles governing modern monetary arrangements, credit and banking in the economic organization. In each instance the genetical development is followed. Special emphasis is placed on the Federal Reserve System, its credit control facilities and endeavors. Prerequisite: Eco. 11, 12.

*Three credit hours.*

**Economics 55, 56.**  
**Business Law I and II.**

This course is intended to give the student some knowledge of the ordinary legal aspects of common business transactions. The course

includes contracts, agency, sales, negotiable instruments and other topics of special importance as a law background of business. Required of all seniors in Business Administration except those majoring in Accounting. *Four credit hours.*

**Economics 57.  
Investments.**

This course is devoted to a study of basic investment concepts; a consideration of classes of securities; investment mechanics and sources of information; and an analysis of industrial, railroad and public utility securities. Prerequisites: Eco. 16, 51. *Two Credit Hours.*

**Economics 58.  
Public Finance.**

This course covers the basic concepts of governmental expenditure, taxation, debt, budget, fiscal policy, intergovernmental fiscal relations, and foreign public finance systems. The economic consequences of public fiscal policies are emphasized. *Two Credit Hours.*

**Economics 59.  
Advanced Corporation Finance.**

The attention of this course is focused upon the problems involved in the expansion, combination, reorganization, and liquidation of business corporations. Topics covered include mergers and consolidations, the holding company, and treatments for financial failure. The course concludes with a consideration of the social aspects of corporate financial policies. Prerequisite: Eco. 51. *Two credit hours.*

**Economics 61, 62.  
Cost Accounting.**

An introductory study of basic cost accounting principles, practices, and procedures, with a special emphasis on job order costs, process costs, standard cost, and estimated costs; managerial control through the use of cost accounting data and procedures; and special applications of cost accounting procedures. Prerequisite: Eco. 31, 32. *Six credit hours.*

**Economics 63, 64.  
Auditing.**

A study of the theory and practice of auditing. The laboratory work covers a test audit of a small manufacturing concern. A written thesis is required and it must be reported upon and defended in an open discussion group. Prerequisite: Eco. 61, 62. *Six credit hours.*

**Economics 65, 66.  
Federal Income Tax.**

This course provides instruction in Federal Income Tax Laws and their application to the incomes of individuals, partnerships, corporations, and fiduciaries. Practice in making out reports and returns, and a study of the procedure of handling claims, form the basis of applied instruction. Prerequisite: Eco. 31, 32. *Four credit hours.*

**Economics 67.  
Advanced Accounting.**

Parent and subsidiary accounting relationships are studied and a critical analysis is made of the principles and postulates of accounting based upon the study of the Accounting Research Bulletins of the American Institute of Accountants and the Accounting Releases of the Securities and Exchange Commission. Research topics are assigned and reported upon. The course is organized on a group discussion basis. Prerequisite: Eco 61, 62. *Three credit hours.*

**Economics 71.  
History of Economic Thought.**

The aim of this course is to stress critically the development of ideas and theories which now dominate economic science, by viewing these various contributions at their sources. Prerequisite: Eco. 25 or 26. *Three credit hours.*

**Economics 72.  
Modern Economic Theories.**

This course deals with the ideas and theories which are now current, examining the biographical background of the various authors, the genesis of their contributions, and instituting a critical evaluation of their work. Prerequisite: Eco. 25 or 26. *Three credit hours.*

**Economics 73.  
Comparative Economic Systems.**

An historical and critical analysis of the various systems of economy is made. The origin, nature, function and economic significance of Communism, Socialism, Nazism, Fascism, Capitalism are explained.

The broad foundations of social philosophy underlying each system are emphasized, as are the variants between theory and practice. The social goals and economic institutions of the various systems are compared. Prerequisite: Economics 25 or 26. *Three credit hours.*

**Economics 75, 76.****Government in Economic Life.**

This course presents an investigation of the philosophical basis of government-business relationship together with an historical development of control. It includes also a study of American constitutional tools and the practice of enforced competition, special problems of control relative to trusts, public utilities, transportation, extractive industries, exchanges and labor. Prerequisite: Eco. 11, 12.

*Six credit hours.*

**Economics 77.****Pro-Seminar in Economic Order.**

Reading and research under direction on a series of economic problems with individual reports and group discussions.

*Three credit hours.*

**Economics 78.****International Trade.**

A study of world trade, foreign investments, debtor and creditor nations, theory of free trade and protective tariffs and a discussion of the recent methods in the control of imports, exports, foreign investments, and the special problems arising from the international movement of goods, services, and capital. Prerequisite: Eco. 25 or 26.

*Three credit hours.*

**Economics 81.****Principles of Marketing.**

This course covers the meaning and cost of market distribution; development of marketing methods; the consumer movement and factors which affect consumption; income and its distribution; functions of transportation, storage, standardization, and grading; various types of retail and wholesale institutions; their functions, problems, and expenses; channels of distribution; integration; direct marketing; brokers and other agents; organized produce exchanges and speculation; merchandising; analysis of margins, expenses, profits and failures of marketing concerns, buying and stock turnover; and governmental regulations. Prerequisite: Eco. 25, 26.

*Three credit hours.*

**Economics 82.****Retail Distribution.**

A survey of the fundamentals of retailing, including elements of retail profit; merchandise policies and merchandise selection; pricing and buying; merchandise control; sales promotion policies; service policies, advertis-

ing, display and layout methods; personnel and organization; store system and operation; accounting, credit and finance. This course will also consider general management policies. The case method will be followed based on "Problems in Retailing" by McNair, Cragg, and Teele, Prerequisite: Eco. 81.

*Three credit hours.*

**Economics 85.****Sales Management.**

The fundamentals of modern sales techniques; the various steps in a realistic sales presentation; sales presentations evaluated; sales organization structure; selection, training and supervision of salesmen. Present emphasis in sales management.

*Three credit hours.*

**Economics 86.****Principles of Advertising.**

A basic course dealing with the function, theory, principles and application of advertising. Special emphasis is placed on copy writing, layout, media research. Students engage in the planning and execution of practice advertising campaigns. Prerequisites: Eco. 85.

*Three credit hours.*

**Economics 91.****Social and Labor Legislation.**

A non-technical study of the various Federal statutes affecting industrial relations. Scope: a review of the background of Labor Law, the application of the Sherman Act to labor organizations, the Norris-La Guardia Act, the Railway Labor Act, the National Labor Relations Act, the Labor Management Relations Act, Social Security and Workmen's Compensation. Study by case method is utilized to bring out the content of these statutes and interpretations by courts and administrative agencies. Prerequisite: Eco. 24.

*Three credit hours.*

**Economics 93.****Personnel Administration.**

This course attempts to give a more specific knowledge of the field of Personnel Management. It explains the nature and development of the field, the technique of selection and placement, the maintaining of sound personnel relations as reducing turnover, handling transfers, dismissals, etc.; conducting safety programs and instituting employee welfare measures. Prerequisite: Eco. 11, 12 or Eco. 24.

*Three credit hours.*

**Economics 95, 96.**  
**Collective Bargaining and Union**  
**Management Negotiations.**

This course presents union-management negotiations which include the protection and determination of bargaining rights in modern industry, the bargaining unit, helps and hindrances to bargaining, the types of shop in union contracts, grievance procedures, means of mediation and arbitration, seniority rules and other factors which occupy the representatives of management and labor when they meet to bargain.

The second semester covers a case study of bargaining contracts as they have worked out

in industry under the National Labor Relations Act. It takes into consideration the effects of various laws which have been passed and which affect the bargaining between labor and management. Prerequisite: Eco. 91.

*Six credit hours.*

**Economics 98.**  
**Business Management.**

An exposition of the operations of a business firm following scientific principles. Emphasis is on the two principal functions of manufacturing, production and selling, with other activities properly related by planning, organizing and controlling. Prerequisite: Eco. 11, 12.

*Three Credit Hours.*

# Courses of Instruction

## DEPARTMENT OF

## Air Science

*Professor:* Lieutenant Colonel Bernet (Chairman)

*Assistant Professors:* Major Callaghan, and Major Fasy

*Instructors:* Captain Carey and Captain Lagrou

The mission of the Air Force Reserve Officers' Training Corps is to select and prepare students, through a permanent program of instruction at civilian educational institutions, to serve as officers in the Regular and Reserve components of the United States Air Force.

The College of the Holy Cross is one of one hundred and seventy-five Colleges and Universities throughout the country which have Air Force ROTC Units.

The program of instruction of the Air Force ROTC at Holy Cross is divided into two courses—the Basic Course, normally completed during the Freshman and Sophomore years and the Advanced Course, normally completed during the Junior and Senior years. During the Basic Course, the Air Force furnishes the AFROTC student with the distinctive Air Force Blue Uniform and necessary text books. While pursuing the Advanced Course, the College is allotted the sum of one hundred dollars per student for the purchase of uniforms. Text books required are furnished by the Air Force. In addition the AFROTC advanced student is entitled to commutation of subsistence which amounts to approximately twenty-seven dollars per month and between his Junior and Senior year, he attends a four to six week summer camp, for which he is paid at the rate of seventy-five dollars a month.

Advanced cadets scheduled for pilot training after commissioning will be given a 35 hour flight training course during their Senior year. This course satisfies the flying requirements of the Federal Aviation Agency to become eligible for a private pilot's license. This flight instruction program is designed to determine a cadet's aptitude for flying.

Students who meet certain qualifications and who are selected by a board of officers, military and institutional, are granted a deferment from induction into the service under the Selective Service Act, provided they sign a deferment agreement, in which they agree among other things, to serve on active duty for a period of time as prescribed by the Secretary of the Air Force. A student completing the course may earn a total of 24 hours elective credit toward his Bachelor's degree.

## ELIGIBILITY REQUIREMENTS

A candidate for enrollment must be a citizen of the United States between the ages of 14 and 23 years at the time of enrollment, be of high moral character and take such physical examinations as may be prescribed by proper authority and/or present a certificate of health from a doctor.

### AS 11, 12

#### Foundations of Air Power—I.

A general survey of air power designed to provide the student with an understanding of the elements of air power and basic aeronautical science. This course includes, Potentials of Air Power, Air Vehicles and Principles of Flight, Military Instruments of National Security and Professional Opportunities in the United States Air Force. Two lectures. One hour leadership training laboratory.

*Four credit hours.*

### AS 21, 22.

#### Foundations of Air Power—II.

Encompasses a broad scope of specialized information concerning the organization, mission and functions of the United States Air Force to include: The Evolution of Aerial Warfare, Elements of Aerial Warfare, United States Air Force Operations in the employment of Air Forces and Space Problems and Possibilities. Two lectures. One hour leadership training laboratory.

*Four credit hours*

### AS 41, 42.

#### Air Force Officer Development.

A year-long treatment of the knowledge and skills required of a junior officer in the Air Force with special emphasis on staff duties and leadership. Includes Air Force Leadership doctrine, staff organization and functions, communicating, instructing, problem solving techniques, leadership principles and practices, and the military justice system.

*Eight credit hours.*

### AS 51, 52.

#### Global Relations.

A study of global relationships of special concern to the Air Force officer, with special attention to such aspects as weather, navigation, geography and international relations.

This course also prepares the cadet for the transition from civilian to military status as a junior officer. Four lectures One hour leadership training laboratory.

*Eight credit hours.*





# Courses of Instruction

## DEPARTMENT OF Biology

Professors: Busam, (Chairman), Malumphy  
Associate Professors: Campbell, Crowe  
Assistant Professor: Flavin (On Leave)

The primary objective of the biology curriculum is to provide a broad and solid foundation in the biological sciences and to stimulate the interested student to pursue graduate study in this field. Consequently, basic courses are designed and required to meet this objective, in the belief that these will equip the student to the best advantage to enter the field of his choice after graduation. As a secondary, though very important objective, the program of courses is designed to satisfy the entrance requirements for the professional schools of medicine, dentistry, and veterinary medicine.

### **Biology 11.** **General Botany.**

A general survey of the plant kingdom, beginning with a study of the vegetative organs of flowering plants, treating both gross and minute structures in their various modifications and physiology. Plant cytology receives detailed consideration with studies in cell structure, nuclear and cell division, and the meiotic divisions. This prepares the ground for a complete synoptic series of the various phyla treated immediately next in order. The course concludes with special studies of the reproductive organs of the flowering plant. Two lectures and two (two-hour) laboratory periods. *Four credit hours.*

### **Biology 12, (55).** **General Zoology.**

A general survey of the animal kingdom introduced by a rapid consideration of the frog to acquaint the student with fundamental notions of structure and physiology. This is followed by a study of the animal cell with its nuclear, cell, and meiotic divisions. Here the laws of heredity are expounded and each evolved with the fruit fly as the specimen of exemplification. The study of the synoptic series of invertebrates is then taken up. Two lectures and two (two-hour) laboratory periods. *Four credit hours.*

### **Biology 21, (66).** **Vertebrate Embryology.**

A study of the development anatomy of vertebrates from the early history of the gametes to the stage of growth exemplified in the 10 mm. pig. Fertilization, segmentation, formation of the three germ layers are studied in the ascaris, sea urchin, amphioxus, and frog. A detailed consideration of the chick embryo from the primitive streak through the 72-hour stage then follows; ending with a thorough study of the 10 mm. pig. The course concludes with a consideration of the theoretical aspects, (as arising from modern experimental studies). Two lectures and two (two-hour) laboratory periods. *Four credit hours.*

### **Biology 22.** **Comparative Anatomy.**

A comparative general study of vertebrate anatomy, development and phylogeny, considering the various systems of organs of the vertebrate body, tracing their evolution through the different classes of vertebrates in terms of basic concepts, principles and methods of comparative zoology. Structure is constantly correlated with function. Laboratory work based upon the systemic study and dissection of representative protochordates, dogfish, skate, turtle or pigeon, and cat or rabbit. Two lectures and two (two-hour) laboratory periods. *Four credit hours.*

**Biology 41, 42.**  
**General Biology.**

This course aims to acquaint the student with the fundamental structure and functions of living things. It begins with a consideration of the Cell Theory and of the cell as the structural and functional unit of plant and animal life. This is followed by a study of selected types of the main groups of plants and animals, culminating with the general anatomy and physiology of the seed plant and the mammal. Special attention is given in the lectures to the applications of biological knowledge to the human race, particularly in connection with the discussion of such topics as parasitism, infection and immunity, organic evolution and heredity. Two lectures and one (two-hour) laboratory period.

*Six credit hours.*

**Biology 51, (56).**  
**Mammalian Anatomy.**

This course provides a detailed study of the rabbit, stressing the skeleton and other anatomical features. Two lectures and two (two-hour) laboratory periods.

*Four credit hours.*

**Biology 52, (65).**  
**Vertebrate Histology.**

This course is a microscopic study of the anatomy of the vertebrates, beginning with a review of the fundamental facts of cellular structure, as treated in Biology 12. Following this is a detailed study of the four normal types of adult tissues: epithelium, connective, muscular, and nervous tissues. The course concludes with an analysis of the various tissue combinations as illustrated in the organs and systems of the vertebrate organism. The necessary correlation between microscopic structure and function is indicated, especially in the latter third of the course. Two lectures and two (two-hour) laboratory periods.

*Four credit hours.*

**Biology 61.**  
**Genetics.**

A course designed to acquaint the student with the fundamentals of heredity and vari-

ation. Among the topics considered are: the history of genetics, the significance of the science, Mendelian inheritance, the chromosome theory, factor interaction, sex determination, linkage and crossing over, gene and chromosome mutation, population genetics, genetics and evolution, human inheritance, and practical applications of the science. Problems exemplifying principles and experimentation are assigned for drill. Laboratory work consists chiefly of elementary exercises in cytogenetics and breeding experiments with *Drosophila*. Two lectures and two (two-hour) laboratory periods.

*Four credit hours.*

**Biology 62.**  
**General Physiology.**

This course investigates many of the primary functions of living organisms. The functions studied are the adaptive power; excitation, conduction and contraction; characteristics of heart actions (including the use of electrocardiograph); gastric and pancreatic metabolism; excretion; respiration; blood-pressure; permeability; protoplasmic movements; general biophysical phenomena. The laboratory work consists of basic experiments on these functions in the living animal and plants, involving extensive use of kymographic recording. Two lectures and two (two-hour) laboratory periods.

*Four credit hours.*

**Biology 67, (58).**  
**Microtechnique.**

This course supplements the course in Vertebrate Histology. It includes the study and practical application of the paraffin, celloidin, and freezing methods of preparing tissues for microscopic examination. A number of the more common and specific stains and staining methods are then considered and applied. A certain number of well prepared slides is required of each student. Two (two-hour) laboratory periods. Recommended for A.B. students in Pre-Medical sequence.

*Two credit hours.*

# Courses of Instruction

## DEPARTMENT OF Chemistry

Professors: Fiekers (Chairman), Baril, Charest, VanHook  
Associate Professors: Martus, Tansey

The Department of Chemistry serves students with concentration in chemistry, biology, physics, pre-medical and pre-dental majors. The Department offers an elective in general chemistry to students of the Junior year who wish to satisfy curriculum requirements. As far as possible, exposure to the attitude of the professional chemist is developed, by combining classes with those scheduled for chemistry majors. The curriculum of the Department of Chemistry has been approved by the Committee on Professional Training of the American Chemical Society. Students who complete detailed requirements for the B.S. in Chemistry degree are then certified as professional chemists in the Society and become eligible for full membership two years from the date of graduation; those receiving the master's degree becoming eligible one year after graduation. A research thesis is normally required at both degree levels in chemistry. Arrangements for transfer to chemistry and/or pre-medical, pre-dental studies from other curricula are often feasible and the degree with major in chemistry can be awarded, even though professional certification cannot be allowed.

### **Chemistry 11.** **General Inorganic Chemistry I.**

A study of the fundamental theories and general laws of chemistry is made. Subatomic and kinetic molecular structure of matter is emphasized. The periodic table of the elements is introduced with sufficient descriptive chemistry to balance theory. Fundamental chemical calculations are practiced and experiments of a quantitative nature are stressed in laboratory. Required of all students majoring in chemistry. Three lectures and two (two hour) laboratory periods.

*Four credit hours.*

### **Chemistry 12.** **General Inorganic Chemistry II.**

This course is a continuation of Chemistry 11. Chemical equilibrium, the chemistry of solutions, ionization, oxidation and reduction are emphasized. For more descriptive matter, the non-metals are first studied and

then the remaining metals. Laboratory work is culminated in a brief introduction to qualitative analysis for anions by semi-micro methods. Required of all students majoring in chemistry. Three lectures and two (two-hour) laboratory periods.

*Four credit hours.*

### **Chemistry 13, 14** **Chemical Problems.**

This course supplements Chemistry 11 and 12 and initiates the beginner in chemistry into the methods of solving problems in the application of chemical principles. Required of students majoring in chemistry. Problems are assigned. One lecture per week for two semesters, or two lectures per week in the second semester.

*Two credit hours.*

### **Chemistry 15.** **General Inorganic Chemistry I.**

This course, which follows essentially the same syllabus as Chemistry 11, is required for

pre-medical students, physics and biology majors. Two lectures and two (two hour) laboratory periods. *Four credit hours.*

**Chemistry 16.**  
**General Inorganic Chemistry II.**

This course, which follows essentially the same syllabus as Chemistry 12, is required for pre-medical students, biology and physics majors. Two lectures and two (two hour) laboratory periods. *Four credit hours.*

**Chemistry 21.**  
**Analytical Chemistry I.**

The laboratory work in this course is largely volumetric in nature and involves exercises in neutralization, precipitation, oxidation and reduction. Certain determinations are checked by gravimetric and other procedures. Lectures develop the theory for this work along with other analytic theory that is common to both quantitative and qualitative analysis. This helps to integrate the course with the qualitative analytic part of the following one into a unified treatment of analytical chemistry. Required of all students majoring in chemistry. Two lectures and two (three-hour) laboratory periods. Prerequisite: Chem. 12 or 16.

*Four credit hours.*

**Chemistry 22.**  
**Analytical Chemistry II.**

This course is a continuation of Chemistry 21. Laboratory work in the first half of this course stresses analysis by gravimetric methods, followed by special analyses, such as electrodeposition, the analysis of limestone, pH determinations, the Kjeldahl nitrogen determination and the determination of carbon in steel. Laboratory exercises for the latter half of the course deal with semi-micro qualitative analysis for metallic ions. Required of students majoring in chemistry. Two lectures and two (three-hour) laboratory periods. Prerequisite: Chem. 21.

*Four credit hours.*

**Chemistry 25.**  
**Qualitative Analysis.—Semi-Micro.**

Lectures deal with the chemistry of analytic reactions and put emphasis on the development and application of the laws of equilibrium and solution. Laboratory work includes analysis for both anions and cations. Required of pre-medical students. Two lectures and two (two-hour) laboratory periods. Prerequisite: Chem. 12 or 16.

*Four credit hours.*

**Chemistry 26. Quantitative Analysis.**

In this course the elements of gravimetric and volumetric analysis are taught with emphasis on the latter. Neutralization, pH determination, oxidation and reduction, applications of the solubility product principle and the Kjeldahl determination of nitrogen are included in the laboratory exercises. Required of pre-medical students. Two lectures and two (two-hour) laboratory periods. Prerequisite: Chem. 12 or 16. *Four credit hours.*

**Chemistry 41, 42.**  
**General Chemistry.**

This course intends to give students, who are not otherwise preoccupied with science, an insight into the material make-up of the world about them. It ranges from sub-atomic particles through atoms, molecules and the modern "giant molecules" that have been emphasized in plastics, synthetic fabrics and textiles as well as in living tissue. Descriptive matter for this course is chosen from economic substances such as sulfuric acid, petroleum, coal tar, rubber, plastics, foods, vitamins, hormones and steel. The laboratory part is selected from the traditions of general chemical laboratory instruction at the start of the course; towards its conclusion, however, a survey of chemical methods of analysis, instrumentation, organic and physical chemistry is made. Demonstrations are used; the scientific method is emphasized. Two lecture hours with demonstration and one (two-hour) laboratory period, each semester. *Six credit hours.*

**Chemistry 46.**  
**Glass Practice.**

Facilities are available in the chemistry department at all times so that the student may practice glass blowing with only informal instruction from the staff. A more formal optional course is offered in those years when sufficient interest and numbers warrant such a course. This course is advised for students majoring in chemistry and physics. Course enrollment is limited to eight students. Exhibits of glassware from various American manufacturers complement the collection of glassware already on hand. Seminar, lecture or demonstration one hour per week. Laboratory practice, four hours per week. (Not offered 1959-1960). *One credit hour.*

**Chemistry 51.**  
**Organic Chemistry I.**

This course consists of introductory lectures on the fundamentals of the science with emphasis on structure, isomerism, homology,

nomenclature, synthesis, reactions, and other properties of organic compounds in their application to medicine and industry. Aliphatic hydrocarbons and cycloparaffins are studied along with their derivatives such as alkyl halides, alcohols, glycols, glycerols, sulfur compounds, ethers, aldehydes, ketones, acids and their derivatives, fats, oils and waxes. In laboratory synthesis is emphasized for all. Some attention is given, however, with pre-medical majors to reactions in qualitative organic chemical analysis. For this course training in qualitative and quantitative chemical analysis is desirable. Required of chemistry majors. Three lectures and five hours of laboratory. Prerequisite: Chem. 12 or 16.

*Four credit hours.*

**Chemistry 52.  
Organic Chemistry II.**

This course is a continuation of Organic Chemistry I. Organic nitrogen compounds, carbonic acid derivatives, stereoisomerism, the carbohydrates and the special reactions of the carbonyl group in theory and in synthesis are here studied. Coal tar derivatives are given attention for about half of the semester. Alkaloids, hormones and vitamins are treated in detail. In laboratory synthesis is emphasized for all; attention is given to qualitative organic chemical reactions in the case of pre-medical students. Required of chemistry majors. Three lectures and five hours of laboratory. Prerequisite: Chem. 51.

*Four credit hours.*

**Chemistry 56.  
Physical Chemistry I.**

A study is made of the fundamental principles and methods by which the behavior of matter in its various states and forms is interpreted. A study of gases, liquids and solids, molecular constitution, thermochemistry, thermodynamics and the quantitative laws of solution is undertaken. Laboratory training in this and the two following courses is designed to test the more important physico-chemical laws; to inculcate physico-chemical technique; and to develop the habit of quantitative interpretation of such phenomena. Training in organic chemistry is a desirable prerequisite. Required of all students majoring in chemistry. Three lectures and five hours of laboratory. Prerequisites: Math 21, 22. Physics 11, 12. Chem. 21 or 26.

**Chemistry 57.  
Physical Chemistry II.**

This is a continuation of Physical Chemistry

I. Homogeneous and heterogeneous equilibria, reaction kinetics, electrical conductance, electromotive force and ionic equilibria are studied. Selected topics from chemical thermodynamics, quantum theory, photochemistry and particle structure are included. Required of all students majoring in chemistry. Training in organic chemistry is a desirable prerequisite. Three lectures and five hours of laboratory. Prerequisite: Chem. 56.

*Four credit hours.*

**Chemistry 58.  
Physical Chemistry III.**

This course deals with special topics in advanced physical chemistry with emphasis on Colloidal Chemistry. Three lectures and one (two-hour) laboratory period. Required of all chemistry majors. Prerequisites: Chem. 56 and 57.

*Four credit hours.*

**Chemistry 61.**

**Advanced Organic Chemistry I.**

This course is comprised essentially of semi-micro qualitative organic analysis. The laboratory part includes the identification of the following unknown types: solid, liquid, liquid mixture, solid mixture, drug, dye, alkaloid and a commercial product. In preparation for a part of the work in second semester, lectures are also given on semi-micro, ultimate and functional group, quantitative organic analysis. For this course, a reading knowledge of scientific German is highly desirable. Required of all students majoring in chemistry. Two lectures and four hours of laboratory. Prerequisites: Chem. 22 or 25 and 52.

*Four credit hours.*

**Chemistry 62.  
Advanced Organic Chemistry II.**

This part of the course is essentially comprised of a study of organic mechanism. In laboratory, a number of examples of "name" syntheses are undertaken and an acquaintance with elemental quantitative analysis is established in practice. Required of all students majoring in chemistry. Three lectures and three hours of laboratory. Prerequisites: Chem. 61.

*Four credit hours.*

**Chemistry 65.  
Organic Chemistry I.**

This course is essentially the same as chemistry 51 but for a shorter laboratory requirement. Required of pre-medical students and biology majors. Three lectures and two (two hour) laboratory periods per week.

*Four credit hours.*

**Chemistry 66.  
Organic Chemistry II.**

This course is essentially the same as Chemistry 52 but for a shorter laboratory requirement. Required of pre-medical students and biology majors. Three lectures and two (two hour) laboratory periods per week.

*Four credit hours.*

**Chemistry Seminar.**

Once a week junior and senior chemistry majors meet with the staff and graduate students in seminar. A public exposition of the Bachelor thesis is required of all senior students who major in chemistry.

**For information on graduate courses in chemistry, refer to page 136.**

# Courses of Instruction

## DEPARTMENT OF

## The Classics

**Professors:** Izzo (Chairman), Ahearn, Bean, Foran, Marique, Sampey

**Associate Professors:** Buckley, Donaldson

**Instructors:** Banks, Carty, Mathews, McGrady

The literature of Greece and Rome as formative factors of primary importance in the culture of the West is the dominant note in the study of Plato, the dramatists, the orators of Greece and their Latin imitators. Direct and remote influences by Greek and Latin authors on the style and content of European literature and especially on English are capital considerations in the study of Cicero and Plato, Horace and Sophocles and the whole series of incomparable masterpieces which have shaped our literatures. Hence, an accurate and detailed study of the original is indispensable to savor and know what our debt is and what absolute values still stand as the model of clear, cogent and graceful writing and speech.

### I. GREEK

**Greek 11, 12.**  
**Elementary Greek.**

Orthography, oral reading and memory of short Greek sentences. Study of grammar with results tested in composition work.

*Six credit hours.*

**Greek 13.**  
**Intermediate Greek.**

Intensive review of grammar. Herodotus—selections from the Histories and a study of Athenian culture. Prerequisite: 2 years of high school preparation.

*Three credit hours.*

**Greek 14.**  
**Intermediate Greek.**

Plato's Apology with readings from the Crito

and Phaedo. A study of Athenian culture and Plato's influence on literature.

*Three credit hours.*

**Greek 15, 16.**  
**Advanced Greek.**

Plato's Apology with readings from the Crito and Phaedo. A study of Athenian culture and Plato's influence on literature. Thucydides—Book VII. A study of Thucydides as an historian and his influence on historical writing.

*Six credit hours.*

**Greek 21.**  
**Intermediate Greek.**

Intensive grammar review. Plato's Apology and references to the Crito and Phaedo. A study of Athenian culture and Plato's influence



on literature. Prerequisite: Greek 11, 12.  
*Three credit hours.*

**Greek 22.**  
**Intermediate Greek.**

Euripides' Medea. A study of Greek tragedy and the special contribution of Euripides to this field.  
*Three credit hours.*

**Greek 25.**  
**Advanced Greek.**

A careful reading of the De Corona of Demosthenes, with a study of the political background of the period.  
*Three credit hours.*

**Greek 26.**  
**Advanced Greek.**

Oedipus Tyrannus—a study of the principles of Greek tragedy and the text of Sophocles. Reference is made to the Coloneus and Antigone in translation.  
*Three credit hours.*

Students in the Honors Program majoring in the Classics engage in the following courses and are expected to gain a certain mastery of the authors studied and the influence of their works on later literature.

**Greek 55, 56.**  
**The Drama of Euripides.**

First Term: Alcestis, Andromache, Hecuba, Hippolytus and Medea. Second Term: Orestes, Bacchae, Iphigenia in Tauris, Ion and Electra. Influence of Euripidean drama on future literatures is specially considered. Intensive consideration is given to metrics, stage directions

and antiquities and textual criticism.  
(Offered in 1956-57) *Six credit hours.*

**Greek 61, 62.**  
**Plato, nine dialogues.**

The translation and critical appreciation of the text; philosophical and literary criticism.  
(Offered in 1958-59) *Six credit hours.*

**Greek 71, 72.**  
**Thucydides, the Histories.**

All 8 books are to be covered completely and the students are responsible for translation and explanation of the text; historical and critical background; the influence of Thucydides and his qualities as an historian.  
(Offered in 1957-58) *Six credit hours.*

**Greek 73, 74.**  
**Sophocles.**

The works of the great tragic writer in the original; a thorough familiarity with important literature on the subject; the influence of Sophocles on subsequent literatures of western civilization.  
(Offered in 1959-60) *Six credit hours.*

**Greek 75, 76.**  
**Herodotus.**

The text of the 9 books of the Histories; a study of the art form of the work; the antecedents of historical writing; Herodotus as a scientific writer: Greek History from the Persian wars to 431 B.C.; the contemporaries of Herodotus; his influence on later literatures.  
(Offered in 1960-61) *Six credit hours.*

## II. LATIN

**Latin 11.**  
**Cicero, Horace.**

Pro Archia—Translation of text and a study of Cicero in Roman Life and Letters. Ars Poetica—Translation of text and a study of Horace as the fountainhead of Western Literary Criticism.  
*Three credit hours.*

**Latin 12.**

Selections from the odes of Horace and Catullus with a study of the philosophy of life and literature therein reflected. Livy—Readings from Book XXI and a study of Livy as an historian.  
*Three credit hours.*

**Latin 15, 16.**

A course for those who have had two years of high school Latin. The first semester is devoted to a review of grammar, composition and the First Catiline of Cicero. The second semester is devoted to a study of Cicero, Virgil, Horace and Catullus. *Six credit hours.*

**Latin 21.  
Tacitus.**

Agricola or Selections from the Annales. Study of Tacitus as a stylist and historian. Advanced work in Latin Composition. *Three credit hours.*

**Latin 22.  
Juvenal and Cicero.**

Juvenal—selected satires. Study of Roman satire and satirists. Cicero—Pro Lege Manilia—a thorough study and application of the principles of Oratorical Composition. *Three credit hours.*

Students in the Honors Program majoring in the Classics engage in the following courses and are expected to gain a certain mastery of the authors studied and the influence of their works on later literature.

**Latin 55.  
Medieval Latin Lyrics I.**

Reading and criticism of pagan and Christian poets from the second to the eighth century A.D. *Three credit hours.*

**Latin 56.  
Medieval Latin Lyrics II.**

Reading and criticism of secular and religious poetry from the eighth to the thirteenth century A.D. *Three credit hours.*

**Latin 61.  
Classical Influence upon English Literature I.**

The influence of Roman Drams upon the de-

velopment of early English Drama. This course will concern itself with the reading, in Latin and English, of Plautus, Terence, and Seneca; it will also consider the early liturgical drama, the Miracle Plays, and Tudor and Elizabethan comedy and tragedy—excluding Shakespeare. *Three credit hours.*

**Latin 62.  
Classical Influences upon English  
Literature II.**

The influence of Classical Satirists upon English satire and epigram. This course will consist of readings, in Latin and English, of Juvenal, Persius and their contemporaries; it will then consider the works of the age of Erasmus and Thomas More, and of the age of Johnson, Milton, Dryden, and Pope. *Three credit hours.*

**Latin 63.  
Virgil.**

The Eclogues, Georgics and the Aeneid are studied in the original to achieve a thorough familiarity with the text; literary criticism and the influences of the Virgilian art on later literatures are emphasized. *Three credit hours.*

**Latin 64.  
Roman Comedy.**

A study of the plays of Plautus and Terence. The purpose of the course is to acquire a knowledge of spoken Latin, plebeian and literary and to learn the Roman idea of dramatic comedy. The following plays will be read: Plautus: Amphitruo, Aulularia, Captivi, Menecmi, Miles Gloriosus, Mostellaria, Persa, Pseudolus, Rudens, Trinummus; Terence: Adelphoe, Andria, Phormio. Ancillary studies include (a) the dependence of Roman comedy upon late Greek comedy, (b) the influence of Roman comedy upon European drama at the Renaissance, (c) the conventions of stage and production, the techniques of the comic spirit in Roman comedy. *Three credit hours.*

# Courses of Instruction

## DEPARTMENT OF Education

Assistant Professor: J. J. Ryan (Chairman)

Instructor: Clarke

Within the framework of the liberal arts tradition, the Department of Education offers preliminary courses to students who wish ultimately to prepare for a career in teaching in secondary schools. The departmental approach emphasizes for these students the necessity of the total encounter with the liberal arts tradition and the studies of the humanities: history, mathematics, science, modern languages, philosophy, and permits the student to engage in a limited number of education courses that involve techniques and methods. The Department provides an opportunity for students majoring in other fields to take courses in Education which may be necessary for secondary school teacher certification and prepares some selected students for the field of counseling. The Department offers to students of all curricula the opportunity to improve reading speed, comprehension, vocabulary, and study skills. This is accomplished through the Reading Clinic maintained by the Department.

### **Education 11. The History of Education.**

A study of the educational systems of Antiquity, Early Christian times, the Middle Ages, the Renaissance and the Reformation; special emphasis being given to those areas which offer clear comparisons and contrasts to present day methods and systems in education. The student studies at close range the educational writings of such leaders as: Socrates, Plato, St. Augustine, DaFeltre, Comenius and Locke.

*Three credit hours.*

### **Education 14. The History of Education in the United States.**

A study of schools in Colonial America and the organization and the development of public and private systems of education in the United States to the present day; special consideration is given to the influence of the past as well as those of Contemporary Europe on the ed-

ucational developments in this country. The student develops a deeper insight into the educational thinking of such leaders as: Mann, Mather, Dewey, Barnard, Hutchins, Thorndike and Terman.

*Three credit hours.*

### **Education 21. Educational Statistics.**

The course consists in the presentation of the basic statistical concepts needed by teachers for a better understanding of behavior. Collecting, classifying and interpreting data through the use of measures of central tendency, variability, correlation, standard scores and sampling are studied. Graphical presentation of material and formulae applicable to test material are given. This course is designed to help students understand, handle with skill, and interpret material presented in important phases of teacher testing as well as the terminology of the Educational Psychologist.

*Three credit hours.*

**Education 22.**  
**Tests and Measurements.**

An examination of the criteria for the selection, administration and the interpretation of commonly used standardized tests, along with a review of the basic concepts in statistics for using test data. A study of the theory of the teacher-made test accompanied by practical suggestions for this type of student examination. Special emphasis will be given to the concept of the intelligence quotient and major group and individually administered testing devices will be demonstrated and studied in detail.

*Three credit hours.*

**Education 51.**  
**Secondary School Methods.**

This course consists in a practical study in the following classroom problems on the secondary level: proper use of confidential student records of the cumulative type, use of major devices and techniques in the field of audiovisual education, correct classroom management with special considerations given to the gifted, the slow learner and the psychological and social deviate; suggestions are also given for proper teacher deportment in non-academic situations involving school life. Individual research projects include detailed study of the major classroom methods of instruction in current use as well as methods for the construction of the long and the short term lesson plan.

*Three credit hours.*

**Education 52.**  
**Philosophy of Education.**

The educator's hope to free the science from the present confusion posits a need of a sound philosophy of education. This philosophy should clearly offer a true understanding and interpretation of man and reality. It should give a sound basis for an ultimate purpose and immediate aims and methods. This aims to resolve confusion by presenting an understanding of ultimate reality, the validity of knowledge, man's origin and nature and final end. The second part of the course is dedicated to an appreciation of other philosophies, particularly those which have had a strong influence upon American education, such as Naturalism, Socialism, Nationalism, Communism and Experimentalism.

*Three credit hours.*

**Education 53.**  
**Educational Psychology.**

This course embraces a systematic study of the educable being and an application of the

more important psychological principles to educational theory and practice. Special emphasis is put upon the nature of the soul and body relationships. It also give thorough consideration of the faculties of knowledge, to the place of the instincts, habit formation, phases of learning, emotional growth and character formation, to the matter of individual differences, transfer of training, interest, the laws of attention and memory insofar as the needs of the educand are concerned. This course is recommended as a preliminary foundation for Education 61, Adolescent Psychology.

*Three credit hours.*

**Education 61.**  
**Adolescent Psychology.**

This course is a study of behavior arising from the problems proper to that period of transition from childhood to maturity. Proper emphasis is given to physiological, psychological and social needs of the adolescent. The study includes the matter of adjustment, integration and the achievement of maturity through the media of conflict and frustration. The forces of heredity and environment on the formation of the adolescent personality are adequately treated. The extensive problems of motivation involving intrinsic and extrinsic determinants are thoroughly discussed.

*Three credit hours.*

**Education 62.**  
**Principles of Guidance.**

This study includes the meaning of guidance on the secondary school level with a special emphasis upon the principles of personal, academic and vocational direction. The knowledge and use of proper and modern techniques of the measurements of intelligence, aptitude and achievement are emphasized as well as the virtue of counsel and counseling skill leading to personal integration through the media of interview and direction. Finally, the means of proper organization of a counseling service in the secondary school including the matter of present needs and the prudent indocrination of the administration and faculty are intensively discussed.

*Three credit hours.*

**Education 71.**  
**Reading in the Secondary School.**

A survey of the current practices of teaching reading, the place of reading in the secondary level and special emphasis upon organizational skills are the main areas to be studied. An understanding of the discovering, appraisal and application of remedial techniques for the

secondary school student who has a reading problem are discussed. The place of reading skills in a particular field of teaching is intensively discussed. *Three credit hours.*

**Education 72.**

**Teaching Observation and Practice.**

An internship course for students who have been approved by the College Authorities as

potential teachers in secondary schools. Both observation and practice will take place in a Public School. Lesson planning and execution under the combined supervision of the classroom teacher and the Director of Teacher Training; individual and group conferences on techniques of teaching, classroom management, diagnostic and remedial devices.

*Six credit hours.*

# Courses of Instruction

## DEPARTMENT OF

## English and Fine Arts

*Professors:* Connors, Cummings, Drumm, Gallagher, McCann, Mears, Shanahan

*Associate Professors:* Lahey, Mirliani

*Assistant Professors:* E. F. Callahan, Dailey, Edmunds, Grace (Chairman), Green, Madden, M. Ryan, Scannell

*Instructors:* Curley, L. J. McCarthy,\* Lewis, Reardon, Skelly

The English courses in the first two years, required of all undergraduates, combine analysis of various form of literature with composition for the purpose both of developing the ability to read with comprehension and of improving the writing and speaking skill of the student. For those with deficiencies in the background necessary for this kind of work, a brief program in remedial English is provided at the beginning of Freshman year.

The English course for majors, either A.B. or B.S., offers a variety of authors, periods, and forms of literature so that the student may choose a sequence of courses fitted to his development and future needs, whether in graduate school, law, business or some other field. The emphasis in all the courses is on the development of critical judgment grounded in sound historical understanding. Two term papers in each of the Junior and Senior years will be required of all Majors.

In addition to the regular sequence of courses, for Honors students and those interested in graduate studies, a series of seminars and tutorials is available by arrangement with the Chairman of the Department. This program allows the superior student to work more independently and probe more deeply into problems than he would ordinarily be required to do.

### **English 11.**

#### **Prose and Poetry.**

An introduction to the study of literature; its characteristics, qualities and relation to the other fine arts; the elements and divisions of literature; prose and poetry. This course develops with a specific study of poetry, its nature and province; distinctive features of poetry, poetic diction, emotional, imaginative and thought elements of poetry. Frequent practice in composition is required. *Three credit hours.*

### **English 12.**

#### **Poetry.**

This course is a continuation of English 11

\* on leave.

treating of poetic forms; epic, lyric and dramatic poetry and critical appreciation and reading. Frequent practice in composition is had. *Three credit hours.*

### **English 21.**

#### **Rhetoric I.**

The theory and practice of persuasive expression constitute the basic content of this course. It embraces the precepts and methods of exposition, of constructive argumentation, of refutation, of motivation. Through the study and analysis of prominent speeches, past and present, and through exercises in individual composition these precepts and methods are put into practice. *Three credit hours.*

of perspective, light and shade, line, form and color, applied to drawing and painting projects from still-life, landscape, and imagination. Exploration of basic techniques including pencil, pen and ink, charcoal, pastel, water color, gouache, and oil. *Three credit hours.*

**Fine Arts 72.**

**Studio Painting and Drawing Course.**

Continues the development of creative expression and sound craftsmanship in the basic

techniques. Drawing and painting projects from still-life and landscape with special emphasis on portrait and figure drawing. Stresses the design and compositional elements in pictorial organization. *Three credit hours.*

Previous art training and experience are not a requirement for Fine Arts 71, 72. A genuine art interest and a desire to develop one's creative art abilities are the only requisites.

# Courses of Instruction

## DEPARTMENT OF

## History and Political Science

*Professors:* G. A. Higgins, (Chairman), Corcoran, Grattan, G. A. King, Lucey

*Associate Professors:* Kinsella, O. McKenna, Reidy

*Assistant Professor:* Glavin

*Instructor:* Wall

### HISTORY COURSES

History is one of the great traditional areas of intellectual concern. It deals with human nature, with what man has thought and said and done, with the persistent problems of human existence, with the totality of man's experience in the past. The aim of history is to give an account of "how things actually happened." The process of discovering the facts, of tracing the connection between events, of uncovering the influences and motive behind past action, of recording the causal relations and development of socially significant past human activities is the study of history. It sweeps back through the centuries to Herodotus "the Father of History." Cicero called history the life of man's memory, and he emphasized that "not to know what took place before you were born is to remain forever a child." In the same vein, in our modern age, it has been said that not to know history is to be condemned to repeat the errors of the past.

The soul of history is truth. As Leo XII stated: "It is the first law of history that it dare say nothing which is false nor fear to utter anything that is true, in order that there may be no suspicion either of partiality or of hostility in the writer." With this noble ideal impressed upon his mind, it is calculated that the study of history will enable the student to know the past and to interpret its true significance.

#### **History 11.** **European History from** **Christian Antiquity to 900.**

An analytical study of the political, social, economic and cultural history of Europe from the beginning of the Christian era through the reign of Arnulf, Carolingian Emperor of Germany.

*Three credit hours.*

#### **History 12.** **European History from 900 to 1648.**

A continuation of History 11 to the Peace of Westphalia.

*Three credit hours.*

#### **History 21.** **The Political and Cultural History** **of Europe: 1648-1815.**

An analytical study of the political, social, economic and cultural history of Europe from the end of the Thirty Years War to the era of Napoleon.

*Three credit hours.*

#### **History 22.** **The Political and Cultural History of** **Europe Since 1815.**

A continuation of History 21 to the era of the Cold War.

*Three credit hours.*



**History 25.****A Survey of Western Civilization from Christian Antiquity to 1648.**

A broad survey of the development of Western Civilization in its more notable movements and institutions to the termination of the Thirty Years War. *Three credit hours.*

**History 26.****A Survey of Western Civilization Since 1648.**

A continuation of History 25 to the present. *Three credit hours.*

**History 43.****Historical Methodology.**

The science of history and its relation to the social sciences; method of historical research and criticism; historians and historical writings. Required of all students majoring in History. *Three credit hours.*

**History 46.****The United States From the Colonial Period to the Civil War.**

A study of the political, social, economic, and cultural history of the United States from the colonial period to the end of the Civil War.

Areas for consideration: Early Settlers on the Fringe of the Atlantic Community; Provincial Society; An American Culture; Expansion; Conflict, and Integration.

Lectures, assigned readings, reports, term paper. Required of all students majoring in History. *Three credit hours.*

**History 47.****The United States Since the Civil War.**

A study of the political, social, economic, and cultural history of the United States since the Civil War.

Areas for consideration: Industrialization and American Society; The American Republic in an Era of Crises; The United States and the Challenge of Totalitarianism.

Lectures, assigned readings, reports, term paper. Required of all students majoring in History. *Three credit hours.*

**History 48.****The United States in the Twentieth Century.**

Some of the salient political, social, economic and religious problems and trends of

the United States are selected for investigation and appraisal. *Three credit hours.*

**History 51, 52.****Diplomatic History of the United States.**

A study of the foreign relations and policies of the United States, with regard to Europe, Latin America, Canada, and the Far East.

Areas for consideration: The Foundations of American Diplomacy; The Diplomacy of Expansion; The Emergence of the United States as a World Power; The United States in a Chaotic World; American Diplomacy and the Menace of Totalitarianism.

Lectures, assigned readings, reports, term paper. Required of all students majoring in History. *Six credit hours.*

**History 55.****Economic History of the United States.**

This course is offered by the Department of Economics as listed under Economics 21. *Three credit hours.*

**History 61.****Tudor England: 1485-1603.**

A one semester upper division course. Weekly discussion on reading assignments. This course emphasizes religious, political and economic factors from the beginning of the reign of Henry VII to the end of the reign of Elizabeth I. *Three credit hours.*

**History 62.****Stuart England: 1603-1715.**

A one semester upper division course. Frequent discussion of reading assignments. This course emphasizes religious, political and intellectual factors from the beginning of the reign of James I to the end of the reign of Anne. *Three credit hours.*

**History 65, 66.****Europe in the Nineteenth Century.**

Napoleonic Era; Congress of Vienna; Political and Social Revolutions; Unification of Germany and Italy; Russia; the British Empire; Social Theories. *Six credit hours.*

**History 67, 68.****Europe since 1914.**

The causes of World War I; the Versailles Treaty; the League of Nations; Russia and

Bolshevism; Nazism; Fascism; the Far Eastern Situation; the Spanish War of 1936; World War II. *Six credit hours.*

**History 71, 72.**  
**History of Latin America.**

A study of colonial and national histories of Latin American Republics. *Six credit hours.*

**History 73, 74.**  
**The Far East in Modern Times.**

A survey of the leading political, social and economic history and modern trends of the Far East: China, Japan, Philippine Islands, India, Pakistan, Burma, Indo-China, Malaya and Indonesia. The emphasis is on China and Japan. *Six credit hours.*

**History 77, 78.**  
**History of Russia.**

A study of the economic, social, religious,

political and cultural history of the Russian people from the period of ancient Kiev to the present. *Six Credit hours.*

**History 81.**  
**Reading Course in History and Government.**

Reading of a selected list of documentary and authoritative works under direction with individual reports and discussion. Students enrolled in this course must receive approval of the Department. *Three credit hours.*

**History 83.**  
**Pro-Seminar in History.**

Research with individual reports and class discussion on the subject of the term paper or any selected topic. Students enrolled in this course must receive approval of the Department. *Three credit hours*

## POLITICAL SCIENCE COURSES

For centuries Government was regarded as a branch of moral philosophy or ethics, but in the nineteenth century it became a separate discipline. It stretches back to two of the world's great thinkers, Plato and Aristotle. In his classic work "The Republic," Plato considered the problem of justice and injustice and its effects upon the individual and society. Aristotle collected and studied the constitutions of the city states of his time, and wrote a classic treatise on the science and art of Government, the "Politics." Aristotle, and later St. Thomas Aquinas, considered political science to be the master science since it integrated all other sciences concerned with the community.

Political Science is the systematic study of the political aspects of man's nature and of the state. It studies human nature in its behaviour as it is affected by changing political processes and situations, the motivation and action of individual leaders, public officials, social and economic groups, public opinion, the process by which public policy is fashioned and patterns of political activity develop. It investigates the nature and purpose of the state, the principles on which it rests, the justification of political authority, the struggle for control of the state, problems of legislation and administration, the relationship between man and his government, the role of the state in achieving the "good life," the legal aspects of political phenomena, the organization, practice and principles underlying court systems, the nature and development of the great, human freedoms, the governmental procedures of different countries, and the relations of states in the family of nations.

The study of Government is calculated to enable the student to know the political ideas of the great thinkers down through the ages, and the forces behind the control of the state.

**Political Science 11, 12.**  
**An Introductory Course in Political Science.**

A study of the nature and functions of the State; types of government; development and essentials of representative government; constitutional government; problems of administration. Required for a major in political science. *Six credit hours.*

**Political Science 41, 42.**  
**American Government.**

An examination of the origin of the federal republic and the content of the Constitution of the United States; national, state and municipal government; modern problems. Required for a major in political science. *Six credit hours.*

**Political Science 45, 46.**  
**International Relations.**

A study of the basic factors in international relations; the multi-state system; power factors; geography, population, natural resources; economic development and system; political system; foreign policy; diplomacy; atomic problems; international organizations; the United Nations, achievements and problems; World Government. *Six credit hours.*

**Political Science 51, 52.**  
**Diplomatic History of the United States.**

A description of this course will be found under History 51, 52. *Six credit hours.*

**Political Science 55.**  
**Constitutional and Legal History of England.**

Origin and development of the parliamentary system and the common law. *Three credit hours.*

**Political Science 57, 58.**  
**History of Political Thought.**

An examination of the political ideas and theories of the pre-Christian writers, the early Christian era, of the scholastics, moderns and contemporaries. *Six credit hours.*

**Political Science 61**  
**American Political Parties.**

The function of political parties and the history of political parties in the United States. *Three credit hours.*

**Political Science 62.**  
**Public Administration.**

A study of the theory, organization and problems of public administration. *Three credit hours.*

**Political Science 65, 66.**  
**Constitutional History of the United States.**

An examination of the origin and content of the Constitution, of the nature of the federal republic and the presidential system, of the development of the Constitution and of current constitutional problems. Prerequisite: PS 41, 42. *Six credit hours.*

**Political Science 71.**  
**The U.S.S.R.**

A study of Soviet Russia offered by the Department of Sociology in the course listed under Sociology 71. *Three credit hours.*

**Political Science 73, 74.**  
**Comparative Modern Governments.**

A study and comparison of modern governments. (Not offered 1958-59). *Six credit hours.*

**Political Science 75, 76.**  
**Government in Economic Life.**

A study of the philosophical basis and salient problems of government business relationship. This course is offered by the Department of Economics under Economics 75, 76. *Six credit hours.*

**Political Science 83.**  
**Pro-Seminar in Political Science.**

Research with individual reports and class discussion on the subject of the term paper or any selected topic. Students enrolled in this course must receive approval of the Department. *Three credit hours*

# Courses of Instruction

## DEPARTMENT OF

## Mathematics

Professors: Nestor, McBrien

Associate Professor: Swords (Chairman)

Assistant Professors: Hartnett, J. R. McCarthy, P. Shanahan

The program in mathematics is based upon a belief that the best possible mathematical preparation for a student in any field is achieved by introducing him to those modern structural concepts which have in this century so brilliantly illuminated the basic unity of mathematics. This emphasis upon concepts as opposed to techniques invariably invokes the interest of the sincere student and quickly brings him to the frontier of mathematics.

Seminars and individual discussion are an integral part of the program which has as one of its basic aims the development of the spirit of inquiry in the student. The Department has a fine library containing a selection of classical and modern books, monographs and journals, which are available to the student.

### Mathematics 11, 12.

#### Principles of Modern Mathematics I, II.

This course is the foundation for all other courses in Mathematics offered by the department. Part I centers around formal algebraic structure and covers the following topics: concept of set, union, intersection, complement, and Cartesian product; informal development of the real and complex number systems, emphasizing the algebraic structure of each of the systems covered in the development; functions; relations, particularly those of order and equivalence; the algebraic structure of the collection of all functions from a set into the real numbers; formal algebraic systems—groups, rings, fields, vector spaces. Examples are, in general, chosen from high school mathematics and the whole course serves to unify the mathematical background of the student. Part II treats elementary analysis and covers most of the usual topics of a beginning Calculus course. Topics treated are: real sequences—limits are treated using the neigh-

borhood topology of the line, Cauchy sequences, completeness of the real numbers, least upper and greatest lower bounds; limits, continuity, and differentiability of functions from the reals to the reals, using sequences and the neighborhood topology of the line; vector spaces of functions; elementary differential equations from the point of view of anti-differentiation; differentiation and anti-differentiation; linear functionals and linear operators; concept of a suitable area function; construction of Jordan content and Lebesgue measure in the plane; construction of integrals of functions from the reals into the reals using content and measure; computation of integrals—the relationship between the Riemann integral operator and the anti-differentiation operator; Riemann sums for general functions; Riemann-Stieltjes integration. The work of the two courses, while primarily concerned with general or theoretical results, furnishes adequate applications of the concepts to the sciences, both natural and behavioral. *Six credit hours.*

**Mathematics 15.**  
**Modern Introductory Analysis.**

An elementary introduction to analysis for students majoring in the biological and social sciences and business administration. Topics covered include fundamental notions on sets and the number system, Cartesian products and the real plane, subsets of the plane, functions, neighborhood topology of the real line, limits and continuity, the derivative function and the definite integral, application to the biological and social sciences.

*Three credit hours.*

**Mathematics 16.**  
**Introduction to Finite Mathematics.**

An introduction to finite mathematics for students majoring in the biological and social sciences and business administration. Topics covered include logical relations and truth tables, probability measure, the binomial distribution and normal law, Markov chains, vectors and matrices, linear programming, applications to the biological and social sciences.

*Three credit hours.*

**Mathematics 17.**  
**Mathematics of Finance I.**

A review of the essentials of algebra followed by a detailed treatment of interest. (Not given 1960-61)

*Three credit hours.*

**Mathematics 18.**  
**Mathematics of Finance II.**

A continuation of Mathematics 17, treating of bonds, annuities, depreciation and capitalization. (Not given 1960-61).

*Three credit hours.*

**Mathematics 21, 22.**  
**Principles of Modern Mathematics III, IV.**

These two courses continue the study of analysis that was begun in Part I. In doing so they place great reliance on Part I and II and assume a thorough mastery of the concepts presented there. The following topics are covered in order: formal development of the real numbers beginning with set theory, the real numbers as a topological metric space; topological metric spaces in general, with particular attention to the Euclidean  $n$ -spaces; additional theorems about derivative functions; treatment of the anti-derivative operator together with a development of most of the standard methods of computation; applications to maxima and minima of functions and to functions from the reals to

Euclidean  $n$ -space; representation and approximation of certain functions—Taylor and Fourier series; integrals of functions from  $n$ -space into the reals via Jordan content, Fubini's theorem and iterated integration; mappings from  $E^m$  into  $E^n$ , limits, continuity defined from a topological point of view, partial derivatives and differentials; elementary combinatorial topology of surfaces; brief treatment of smooth manifolds; initial study of functions from the complex numbers into the complex numbers together with applications; formal treatment of elementary differential equations, restricted to the elementary types.

*Six credit hours.*

**Mathematics 41, 42.**  
**Advanced Calculus I, II.**

The purpose of this course is to introduce the student to analysis in general and especially to the study of continuous transformations, vector analysis, and complex variables. The content of the course includes the following topics: brief review of the real and complex number systems, with extension of the trigonometric and exponential functions to the complex numbers; topology of  $E^n$ , Heine-Borel theorem and continuous transformations; a brief treatment of linear transformations leading to the concept of differentials; the chain rule for differentiable transformations; the gradient of a real valued function; Jacobians and the implicit function theorem; Riemann-Stieltjes integration and multiple integrals; transformation of integrals; line integrals and Green's theorem; theorems of Gauss and Stokes; Cauchy integral theorem, Laurent expansions and residues. Prerequisite: Math. 11, 12, 21, 22.

*Six credit hours.*

**Mathematics 45, 46.**  
**Introduction To Algebraic Topology, I, II.**

The following topics are studied: basic point set topology, including the concepts of compactness and connectedness; the classification problem for topological spaces; one- and two-dimensional manifolds; closed surfaces, Euler characteristic, connectivity numbers; homology and homotopy of curves on a surface; the singular homology theory with proofs of theorems on exactness, homotopy and excision; computation of singular groups of certain spaces with application to classification of surfaces; axioms for homology theory; polyhedra and the simplicial homology groups; cohomology groups; homotopy theory.

*Six credit hours.*

**Mathematics 51, 52.****Introduction to Abstract Algebra I, II.**

The purpose of this course is to provide an introduction to basic algebraic systems for students who have had Mathematics 21, 22 as a background. Topics covered in the first semester include semi-groups and groups, rings and ideals, fields and field extensions, factorization theory, groups with operators and some lattice theory. Topics covered in the second semester include a more detailed study of finite and infinite dimensional vector spaces including function spaces, linear transformations and matrix algebra, dual spaces. Application to other branches of mathematics and to science are used to demonstrate the wide utility of the results.

*Six credit hours.*

**Mathematics 53, 54.****Principles of Analysis and Topology I, II.**

Part I covers elementary general topology and includes these topics: sets and mappings of sets considered generally, indexed sets, De Morgan's theorems; the real line—Cauchy sequences, open sets, connected sets, limit points and closed sets, closed and bounded sets, continuous functions and properties of continuous functions; topological spaces—the  $T$ -spaces, metric spaces, elementary properties of topological and metric spaces, mappings and subspaces, connected sets; metric spaces—elementary properties of metrics and metric spaces, local connectivity and the introduction of an  $M$  metric, second countable spaces, the Euclidean spaces. Part II covers Lebesgue measure in  $E^n$  and furnishes a brief introduction to abstract measure theory. The general topics are: Jordan content in  $E^n$ ; Lebesgue measure in  $E^n$ ; the Riemann integral; the Lebesgue integral; the relationship between integration and differentiation for functions from  $E^1$  into  $E^1$ ; abstract measure and integration. Prerequisite: 11, 12, 21, 22.

*Six credit hours.*

**Mathematics 55, 56.****Theory of Probability I, II.**

In this course the emphasis is placed on the mathematical foundations of probability. Applications to statistics and other fields are given throughout the development. Topics covered include sample spaces, some combinatorial analysis, the relation of probability to Boolean algebra and measure theory, the binomial and Poisson distributions, and the normal approximation. Topics in the second term include the central limit theorem, law of large numbers, random walk problems, and Markov chains. Special topics, not part of probability theory, are included in this term. These include some elementary calculus of finite differences and fundamental concepts in the theory of games.

*Six credit hours.*

**Mathematics 61, 62.****Special Topics I, II.**

Special topics involving extensive reading in mathematical literature. The subject matter may vary to suit the requirements of the student. This course is intended for students who will have completed, with high honors, four complete upper division courses in mathematics.

*Six credit hours.*

**Mathematics 65, 66.****Seminar**

The chief aim of the mathematics seminar is to provide an opportunity for individual and group investigation of topics not covered in course work by the mathematics majors, for whom the course is required. The method employed in the seminar is active participation on the part of the students. The general topic of discussion varies from year to year; for the year 1959-60 it is the Foundations of Probability—the general topic for 1960-1961 is Abstract Algebraic Geometry.

# Courses of Instruction

## DEPARTMENT OF

## Modern Languages

**Professors:** Boursy, Bowen, L. Fitzgerald, S. E. Flynn

**Associate Professor:** McNerney

**Assistant Professors:** Desautels (Chairman), Horwath, J. McKenna

**Instructors:** Baker, F. Fitzgerald, J. Flynn, Kopp

The purpose of the study of modern languages in a college with liberal arts traditions is the gradual acquisition of proficiency in those languages. Language proficiency means ability in the four skills: understanding, speaking, reading and writing, as well as some familiarity with the culture and civilization of the country concerned. More precisely: a) The student should be able to understand an educated speaker talking at a normal rate of speed on subjects within the range of the student's experience. b) He should be able to express himself orally with a satisfactory accent on subjects within the range of his experience. c) He should be able to read without the aid of a dictionary prose of normal difficulty dealing with non-technical subjects. d) He should be able to put into writing with reasonable correctness his views on subjects within the range of his experience. These are the aims of the Modern Language Department at Holy Cross College. They coincide with those of the most reputable Liberal Arts Colleges in the country as well as with those of the Association of Modern Languages.

### I. FRENCH.

#### **French 11, 12. Elementary French.**

The aim of this course is to teach the student to speak, read and write simple idiomatic French. Three hours weekly, and two periods of laboratory practice. *Six credit hours.*

#### **French 15B, 16B. Lower-Intermediate French.**

An intensive review of the elements of the French language, with readings from standard authors, to supplement 2 years of average secondary school preparation. Three hours weekly, and one period of laboratory practice. *Six credit hours*

#### **French 15A, 16A. Upper-Intermediate French.**

A systematic review of the fundamentals of the language, with intensive and extensive reading of selected texts. Three hours weekly, with one period of laboratory practice. Prerequisite: French 12, or better than average score on the placement test. *Six credit hours.*

#### **French 21B, 22B. Advanced French I.**

Advanced composition with a survey of selected masterpieces from the Middle Ages to the twentieth century. Three hours weekly. Prerequisite: Lower-Intermediate French, 16B. *Six credit hours.*

**French 21A, 22A.**  
**Advanced French I.**

The aim of this course is to acquaint the student with the literary masterpieces of French literature from the Middle Ages to the end of the 17th century. Three hours weekly, with one period of laboratory practice. Prerequisite: Upper-Intermediate French, 16A, or outstanding performance on placement test.  
*Six credit hours.*

**French 25, 26.**  
**Advanced French II.**

This course will acquaint the student with the social, philosophical and literary ideas of the 18th and 19th centuries. Three hours weekly. Prerequisite: Advanced French, 22A.  
*Six credit hours.*

**French 41, 42.**  
**Development of French Classicism.**

A study of the masters of the 17th century.  
*Six credit hours.*

**French 45, 46.**  
**Age of Enlightenment in France.**

A study of the works of Bayle, Fontenelle,

Montesquieu, Voltaire, Rousseau and Diderot.  
*Six credit hours.*

**French 51, 52.**  
**Romanticism and Realism.**

A study of the works of Chateaubriand, Lamartine, Musset, de Vigny, Hugo, Balzac, Stendhal, Flaubert.  
*Six credit hours.*

**French 55, 56.**  
**Survey of the Theatre in France.**

A study of the leading French dramatists, Corneille, Racine, Moliere, Beaumarchais, Hugo, etc.  
*Six credit hours.*

**French 61, 62.**  
**French Literature: 1800 to Modern Times.**

*Six credit hours.*

**French 71, 72.**  
**French Conversation and Composition.**

*Six credit hours.*

**French 75, 76.**  
**Phonetics and Diction.**

*Six credit hours.*

## II. GERMAN

**German 11, 12.**  
**Elementary German.**

A thorough study of inflections and of essential elementary syntax; drill in easy German composition and the acquisition of a working vocabulary. Three hours weekly, with two periods of laboratory practice.  
*Six credit hours.*

**German 15B, 16B.**  
**Lower-Intermediate German.**

An intensive review of the fundamentals of German, with readings from standard authors, to supplement 2 years of average secondary school preparation. Three hours weekly, with two periods of laboratory practice.  
*Six credit hours.*

**German 15A, 16A.**  
**Upper-Intermediate German.**

Thorough review of all essentials of grammar; drill in German composition; special study of the more difficult points of syntax; reading and translation of German texts with special attention to the grammatical constructions involved. Three hours weekly, with one period of laboratory practice. Prerequisite: German 12, or better than average score on the placement test.  
*Six credit hours.*

**German 21B, 22B.**  
**Advanced German I.**

A survey of selected modern German texts, with special attention given to the development of a large reading vocabulary. The course is largely conducted in German. Three hours weekly. Prerequisite: Lower-Intermediate German, 16B.  
*Six credit hours.*



**German 21A, 22A.**  
**Advanced German I.**

Reading and study of both prose and poetry of the various literary movements, with special emphasis on modern authors. Three hours weekly, and one period of laboratory practice. Prerequisite: Upper-Intermediate German, 16A, or outstanding performance on placement test.  
*Six credit hours.*

**German 25, 26.**  
**Advanced German II.**

Conducted entirely in German, this course is completely practical and presupposes a collateral knowledge of German grammar and vocabulary. The continuous writing of compositions in German is important and constitutes the preparatory part of the course, while the class periods fulfill in part the auditory and oral drill requirements. The ability of the student to understand, speak and write German reasonably well will be tested both orally and in writing by the members of the German Department at the termination of each semester. Prerequisite: German 15, 16.  
*Six credit hours.*

**German 41, 42.**  
**German Literary History.**

This is a background course and presents a general connected survey of the development of German culture and literature from its beginnings to today. For its earlier periods particularly, it is accompanied by selected illustrative readings in modern German translations. Prerequisite: German 25, 26.  
*Six credit hours.*

**German 45, 46.**  
**Goethe and Romanticism.**

*Six credit hours.*

**German 51, 52.**  
**Realism.**

*Six credit hours.*

**German 71, 72.**  
**German Conversation and Composition.**

*Six credit hours.*

### III. ITALIAN

**Italian 11, 12.**  
**Elementary Italian.**

This course aims to equip the student with a succinct and useful knowledge of the essentials of the Italian grammar, giving him the ability to read, write and speak idiomatic Italian, with daily drill in phonetics. Three hours weekly, with two periods of language laboratory.  
*Six credit hours.*

**Italian 15, 16.**  
**Intermediate Italian.**

A thorough review of Italian grammar is made through reading, composition, oral and aural practice. Three hours weekly, with one period of language laboratory.  
*Six credit hours.*

### IV. RUSSIAN

**Russian 11, 12.**  
**Elementary Russian.**

A thorough study of the essentials of Russian grammar. Three hours weekly, with two periods of language laboratory.  
*Six credit hours.*

**Russian 15, 16.**  
**Intermediate Russian.**

Rapid review of the fundamentals of Russian, with study of the more difficult points of syntax, and with graded readings. Three hours weekly, with one period of language laboratory.  
*Six credit hours.*

## V. SPANISH

### **Spanish 11, 12. Elementary Spanish.**

The aim of this course is to teach the student to speak, read and write simple idiomatic Spanish. Three hours weekly, with two periods of laboratory practice. *Six credit hours.*

### **Spanish 15B, 16B. Lower-Intermediate Spanish.**

An intensive review of the elements of the Spanish language, with readings taken from standard authors, to supplement 2 years of average secondary school preparation. Three hours weekly, and one period of laboratory practice. *Six credit hours.*

### **Spanish 15A, 16A. Upper-Intermediate Spanish.**

A systematic review of the fundamentals of the language, with intensive and extensive reading of selected texts. Three hours weekly, with one period of laboratory practice. Prerequisite: Spanish 12, or better than average score on the placement test. *Six credit hours.*

### **Spanish 21A, 22A. Advanced Spanish I.**

Advanced composition with a survey of se-

lected literary masterpieces. Three hours weekly. Prerequisite: Spanish 16, or outstanding performance on placement test.

*Six credit hours.*

### **Spanish 25, 26. Advanced Spanish II.**

Emphasis is given to composition, while acquainting the student with the masterpieces of the 17th, 18th, 19th centuries. Three hours weekly. Prerequisite: Spanish 22A.

*Six credit hours.*

### **Spanish 31, 32. Survey of Spanish Literature to 1700.**

*Six credit hours.*

### **Spanish 61, 62. Survey of Spanish Drama.**

*Six credit hours.*

### **Spanish 71, 72. Conversation and Composition.**

*Six credit hours.*

# Courses of Instruction

## DEPARTMENT OF

## Naval Science

*Professor:* Captain Will (Chairman)

*Associate Professor:* Commander Bracken

*Instructors:* Major Kelly, Lieutenant Commander DeMasters, Lieutenant Steckbeck,  
Lieutenant Salva, Lieutenant (jg) O'Sullivan

The Department of Naval Science, a recognized department of instruction within the College, has as its purpose the providing of instruction in professional subjects dealing with the Navy and Marine Corps, which, when added to the other academic instruction provided by the College, will meet the purpose for which the Naval Reserve Officers Training Corps was established.

The purpose of the Naval Reserve Officers Training Corps, (The Corps consists of the NROTC Units at fifty-two colleges and universities throughout the United States) is to provide a steady supply of well-educated junior officers for the Navy and Marine Corps, and to build up a reserve of trained officers who will be ready to serve the country at a moment's notice in a national emergency. Students enrolled in the NROTC are of two categories—Regular and Contract. All procedures, benefits and requirements described hereinafter apply to both categories of NROTC students unless specifically indicated as pertaining to only one of the two types.

### MILITARY STATUS

NROTC students wear the uniform only on such occasions as prescribed by the Professor of Naval Science. Normally, this will be at drills, ceremonies, and on cruises. In addition to the ordinary requirements of gentlemanly conduct, they are subject to naval discipline and must conduct themselves at all times in a military manner when under naval jurisdiction, that is, when attending naval science classes, drills and exercises, and during summer training periods.

With the exception of the above described instances, NROTC students are in the same category as other students of the College.

### STATUS ON GRADUATION

Contract students: After completion of their academic requirements for a baccalaureate degree and the four years of Naval requirements, which include the

summer training, contract students are commissioned as ensigns in the U.S. Naval Reserve or second lieutenants in the U.S. Marine Corps Reserve. They are eligible for call to active duty as indicated below under "Draft Deferment".

Regular students: Upon graduation, regular students are commissioned as ensigns in the U.S. Navy or second lieutenants in the U.S. Marine Corps. They are normally required to serve on active duty for a period of four years. During this period they may request to remain on active duty as career officers. If they do not so request, or if not selected, they are released to the appropriate status in the Reserve.

### SUMMER TRAINING

Regular students: All regular students are required to take two summer cruises and one summer period of aviation-amphibious indoctrination, usually of eight weeks' duration each. The cruises are made on board modern warships. The aviation indoctrination is usually conducted at Corpus Christi, Texas, and the amphibious indoctrination is usually conducted at Little Creek, Virginia.

Contract students: Contract students are required to take only one summer cruise during the summer between their junior and senior years, the cruise being of approximately six weeks' duration.

Travel expenses for both regular and contract students from the College to the summer training site and return are furnished by the government. In addition, all students receive active duty pay during summer training amounting to approximately \$75.00 per month.

### EMOLUMENTS

Regular students: For regular students the cost of tuition, fees, and textbooks is paid by the government. Necessary uniforms are provided and students receive retainer pay at the rate of \$600 per year.

Contract students: Contract students receive no emoluments during the first two years in the program. During the last two years they receive a subsistence allowance which amounts to approximately \$27.00 a month. They are issued the necessary uniforms and Naval Science textbooks at no expense.

### ELIGIBILITY REQUIREMENTS

The College of the Holy Cross is one of fifty-three Colleges and Universities in the country which have Naval ROTC Units.

A candidate for the NROTC must:

1. Be a male citizen of the United States.
2. At the time of his enrollment, if a minor, have the consent of his parent or guardian.

3. Be not less than seventeen nor more than twenty-one years of age on July 1 of the year in which he enters the program. (Contract students may be enrolled if sixteen years of age on July 1 of the year in which he enters the program.)

4. Gain his own admittance to the College.

5. Agree to remain unmarried until commissioned.

6. Be physically qualified, in accordance with the requirements for the U.S. Naval Academy, except that the vision requirements for Contract students are 20/40 each eye, corrected by lenses to 20/20.

7. If a contract student, he signs an agreement to accept a commission, if tendered, as an ensign, U.S. Naval Reserve, or second lieutenant, U.S. Marine Corps Reserve, and serves two years on active duty upon completion of College training, if called by the Secretary of the Navy.

8. If a regular student, he signs an agreement to accept a commission, if tendered, to retain this commission for a period of six years and to serve not less than four years on active duty as an officer, if called by the Secretary of the Navy.

#### **SPECIAL PROCEDURES**

Contract students are enrolled by the Professor of Naval Science upon their own application and are subject to selection and physical examination at the College within a limited quota as assigned by the Navy Department. These students are taken primarily from the entering freshman class at the beginning of the fall semester.

Inasmuch as the selection of contract students is completed during the first week of the fall semester and in view of the fact that the contract quota is limited, all students who desire to be considered for the NROTC program should apply prior to the first day of classes in the fall. An application is not binding, and, even after enrollment in the program, a contract student may withdraw from the program, without prejudice, upon his own request at any time within the first two years.

However, enrollment is normally for four years and there is no change from "basic" to "advanced" status when entering the junior year of college.

Regular students enter the NROTC through a nation-wide test and selection system conducted by the Naval Examining Selection, Science Research Associates, 104 Pearl Street, McHenry, Illinois. The competitive examination is conducted in the late fall of the year, approximately nine months before enrollment of the applicant.

Transfer from contract to regular status; Contract NROTC students may compete for regular status and if selected will be enrolled as regular students without loss of standing.

### THE NAVAL SCIENCE STUDENT

Disqualified NROTC applicants may take the Naval Science course for the purpose of acquiring advanced standing to be used when applying for NROTC enrollment at a later date in the event of removal of the disqualification. Also, the Naval Science course may be taken by those students who have no interest in NROTC enrollment, but who wish the instruction. Students in either of the above categories are known as Naval Science Students.

Naval Science students receive credit for satisfactory completion of the Naval Science course, but have no official status in the NROTC Program, and receive none of the advantages of the Regular and Contract NROTC students other than the training and background gained. This training would prove to be beneficial should the graduated Naval Science student apply for a commission through sources normally available to college graduates other than the NROTC Program.

### DRAFT DEFERMENT

A student enrolled in the Naval ROTC will be deferred from the draft (Selective Service of 1948 and Universal Military Training Act of 1951) if he satisfactorily pursues the Naval ROTC course for four full years, including the summer training period applicable to his status as contract or regular student.

A contract student who is disenrolled loses his draft deferment.

A regular student who is disenrolled will be transferred to enlisted status in the U.S. Naval Reserve or U.S. Marine Corps Reserve.

The Naval Science student is not deferred from induction for service under the Selective Service Regulations.

### CURRICULA

General: In order to obtain a commission either in the U.S. Navy, U.S. Naval Reserve, U.S. Marine Corps, or U.S. Marine Corps Reserve, students are required to obtain a baccalaureate degree and complete twenty-four semester hours in the Department of Naval Science.

The following courses may not be taken by a regular student:

Pre-Medicine, PreDental, and Pre-Theological.

A contract student may take such courses but it is to be remembered that all NROTC graduates usually go on immediate active duty upon graduation, and so additional training for one of those professions will be delayed until completion of the period of obligated naval service.

During each semester every student is required to attend two laboratory periods of one hour's duration each week. He is also required to complete mathematics through trigonometry, or a semester of college mathematics, by the end of his sophomore year. In addition, each regular student must complete one year of college physics. Two separate curricula in naval science subjects are offered in the junior and senior year, leading to commissions in the Line of the Navy, and the Marine Corps.

#### **NS 11.**

##### **Sea Power and Orientation.**

A study of the Department of Defense, the basic customs and traditions of the Navy, the present-day Navy and the student's part in it.

*Three credit hours.*

#### **NS 12. Sea Power and Orientation.**

A study of the influence of Sea Power upon global history. The stimulation of a living interest in the Navy and an appreciation of the contributions of Sea Power to the past, present, and future progress of the United States.

*Three credit hours.*

#### **NS 21.**

##### **Naval Weapons.**

A study of ballistics and ordnance, fire control equipment, and the integration of these units into systems for their tactical employment in combat. The development of a realistic and practical approach to the duties of a gunnery department officer.

*Three credit hours.*

#### **NS 22**

##### **General Psychology**

A study of the psychological nature of the individual and of groups, and the influences effecting human action and interpersonal relations. (This course will be taught by a member of the Department of Education).

*Three credit hours.*

#### **NS 41.**

##### **Naval Engineering.**

A study of basic naval engineering, including main propulsion steam plants, diesel engines, and ship stability.

*Three credit hours.*

#### **NS 42.**

##### **Navigation.**

A study of the theory and technique of surface navigation. Familiarization of the student to the extent that he will be able to assist intelligently the Navigator of a ship to conduct it safely by modern methods of navigation. A study of the fundamentals of naval tactics.

*Three credit hours.*

#### **NS 51.**

##### **Naval Operations.**

A study of the responsibilities of naval officers in shipboard operations; such as relative movement, tactical communications and instructions, and rules of the nautical road. To afford a basic understanding of fleet communications and an introduction to electronic countermeasures. A study of the operational importance of the weather.

*Three credit hours.*

#### **NS 52.**

##### **Naval Administration.**

A study of the general responsibilities of administration, discipline, and leadership, which the student must assume upon acceptance of a commission.

*Three credit hours.*

Candidates for commissions in the Marine Corps will be required to complete NS 11, 12, 21, and 22. In place of NS 41, 42, 51, and 52, they will take courses in Marine Corps subjects as follows:

#### **NS 45.**

##### **Evolution of the Art of War.**

An historical study of the evolution of warfare, including: Principles of War, Offensive Combat, Defensive Combat, and studies of warfare in specific eras.

*Three credit hours.*

**NS 46.**  
**Evolution of the Art of War and**  
**Modern Basic Strategy and Tactics.**

A continuation of the historical study of the evolution of warfare developing into a treatment of modern basic strategy and tactics.  
*Three credit hours.*

**NS 55.**  
**Amphibious Warfare, Part I.**

A study of the development of amphibious warfare operations and their employment in World War II.  
*Three credit hours.*

**NS 56.**  
**Amphibious Warfare, Part II.**  
**Leadership, and the Uniform Code**  
**of Military Justice.**

A continuation of the study of amphibious warfare concentrating on tactics, equipment, and modern methods of employment. A study of the general responsibilities the student must assume when commissioned, in the fields of leadership, discipline, and naval justice.

*Three credit hours.*



# Courses of Instruction

## DEPARTMENT OF

## Philosophy

**Professors:** Dowling, Gillis, Haran, Hutchinson, Keating, Moran, Sarjeant, Shea  
**Associate Professors:** Drohan, Harrington, Keleher, MacDonald, *Emeritus*  
**Assistant Professors:** F. F. Callahan, J. D. Crowley, Donnelly (Chairman)  
**Instructors:** DeAngelis, Dewing, McKeon, Stevens

### **Philosophy 21. Logic**

Introduction to philosophy; great names and great systems; definition and division of philosophy.

Study of the idea; definition, extension, and comprehension; division—the universal idea, predicable and predicaments. Terms: mental and oral—division—analogy and supposition.

The study of the judgement: definition—propositions, their nature and division—extension and comprehension of the predicate—quantity and quality of propositions—opposition, conversion and equivalence of propositions.

The study or reasoning: the syllogism, various kinds and their laws—figures and modes; other forms of argumentation; demonstration and its division; deduction and induction, complete and incomplete. *Three credit hours.*

### **Philosophy 22. Epistemology.**

Study of truth, and of the mind in relation to truth; ignorance, doubt, opinion, certitude; means of arriving at certitude; senses, intelligence, reason, intellectual analysis; motives and criteria of truth; objective evidence. *Three credit hours.*

### **Philosophy 41. General Metaphysis.**

Realistic approach to being. Starting point: the sensory-intellectual “given”. The problem of change: potency and act, substance and

accident, matter and form. Essence and existence. The analogy of being. The attributes of being. Contingent and necessary being. The first cause and supreme being. *Three credit hours.*

### **Philosophy 42. Cosmology.**

Subject matter, bodily things. Physical essences; atoms, elements, substantial changes and essential differences. Mechanical atomism, dynamism, the hylomorphism as accounts of the ultimate constitution of matter. Quantity, and the meaning of ‘continua’. Efficient and final causality in the activities of bodily things. Laws of nature; miracles. Cosmogony, and the monistic explanations, both pantheistic and naturalistic. Cosmogony by creative act. *Three credit hours.*

### **Philosophy 51. Natural Theology.**

The Existence of God: various philosophic attitudes; our knowledge of this truth; cosmological and teleological arguments; Ontologism, Traditionalism, and Pragmatism in regard to this truth.

The Essence of God: the idea of the Infinite; unity of God; physical and metaphysical essence; Modern Pantheists; Anthropomorphism.

The Divine Attributes; immortality, eternity and immensity of God; simplicity and infinity of God; The Divine Intellect and Knowledge; Fore-knowledge of God; Fore-knowledge of free actions; the Divine Will; Omnipotence of God.

Activity of God with Creatures: preservation of creatures; concurrence; Providence; its relation to evil.

Supplementary Questions: Schopenhauer's 'World Will'; Hartmann's 'Unconscious'; Alexander, on Space-Time. *Two credit hours.*

**Philosophy 52.**  
**Fundamental Psychology.**

Life in General: properties of living and non-living bodies; immanency of actions; Scholastic concept of life.

Plant Life: sensitive life; unity and divisibility of the animal soul; instinct and intelligence; theories on the origin of the instinct.

Origin of Life: the scholastic theory on the origin of the first living bodies; spontaneous generation; origin of plant and animal species.  
*Two credit hours.*

**Philosophy 53.**  
**Advanced Empirical and Rational Psychology.**

A study of sensitive life, including the nature of sensation and its properties; doctrine of the species, the external and internal senses, hallucinations and dreams; the perception of the material world and the refutation of the skeptical theories of Descartes, Locke, Berkeley, Hume, Mill, Bain; the sensuous appetite. A study of intellectual life, including the origin of ideas, judgement and reasoning, attention and reflection, memory, the rational appetite—the will, its nature and freedom.

A study of the human soul, its substantiality, individuality, simplicity and spirituality; refutation of false theories on the nature of the human soul; origin and destiny of the human soul; anthropological evolution.  
*Four credit hours.*

**Philosophy 55.**  
**General Ethics.**

Definitions, nature, object necessity of Ethics; the ultimate end of man; beatitude; the human act; merit and accountability; the passions; virtue and vice; morality of human acts; the norm of morality; Utilitarianism and Hedonism: Bentham, Mill and Spencer; the eternal law and the natural law; properties and sanction of the natural law; nature and

origin of moral obligations; Kant's categorical imperative; Conscience. *Four credit hours.*

**Philosophy 56.**  
**Special Ethics.**

Man's duty to his Creator; Rationalism; Indifferentism.

Man's duty to himself; man's duty to preserve himself; suicide.

Man's duty to his neighbor; direct and indirect killing; killing done in self-defense; lying, mental reservation.

Right of ownership: Communism and Socialism; theories of Henry George; Herbert Spencer on the right of property; modes of acquiring property; rights of disposing property by will; contracts; relations of capital and labor; trade unions; strikes.

Social Ethics: Society in general: nature and end of domestic society; unity and indissolubility of matrimony; divorce; parental authority; education of the child.

Civil Society: nature, end and origin; false theories on the origin of civil society; Hobbes and Rousseau; the Scholastic doctrine; forms of civil government; citizenship; universal suffrage; the functions of civil government—legislative, judiciary, executive; taxation; death penalty; freedom of worship; freedom of the press; state education.

International Law: various meanings of *Jus Gentium*; foundation international law; mutual relations of nations; right of commerce; rights of neutrals; nature and justice of war; arbitration.  
*Four credit hours.*

**Philosophy 71, 72.**  
**Introduction to Current General Psychology.**

The course aims to acquaint qualified students with the more important and representative areas of current scientific psychology. Thus both those intending to major in psychology and those seeking an understanding of the significance of psychology in human experience will be introduced to the fundamental principles of individual psychology as

operative in motivation, learning, perception, and thinking. The course also presents the application of these principles to applied areas such as emotion, social processes, assessment of abilities and personality, and biological substrates of behavior. *Six credit hours.*

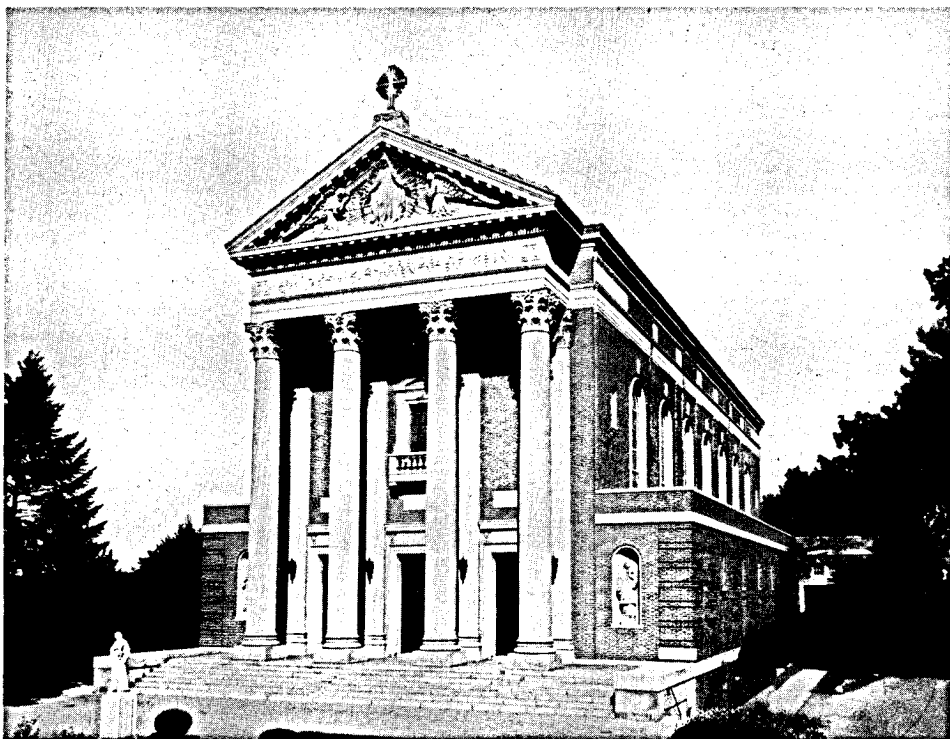
**Philosophy 73.**

**The Structure and Function of the Human Brain.**

The brain performs a central role in all

complex psychological behavior. Knowledge of such a structure is a prerequisite for contemporary psychology. The gross anatomical structure of the brain will be analyzed and described. Since the cortex, thalamus and hypothalamus are predominant structures employed in psychological activity and experience, these will receive special emphasis. The functional aspects of the brain together with the cranial nerves will be explained. Suitable models, illustrations and specimens will be available for demonstration.

*Three credit hours.*



# Courses of Instruction

## DEPARTMENT OF Physics

**Professors:** Smith (Chairman), Connolly, McDonald  
**Associate Professors:** MacDonnell  
**Assistant Professor:** Kennedy

The course leading to the degree of Bachelor of Science in Physics is designed to provide a thorough foundation in the principal branches of physics as an immediate preparation for professional work in the field and for further study leading to advanced degrees in science and engineering.

### PHYSICS

**Physics 11, (25, 45).  
Mechanics, Heat and Sound.**

An introduction to Mechanics, Heat and Sound. Three lectures and one (three-hour) laboratory period. *Four credit hours.*

**Physics 12, (26, 46).  
Electricity and Light.**

An introduction to Electricity and Light. Continuation of Physics 11. Three lectures and one (three-hour) laboratory period. *Four credit hours.*

**Physics 21.  
Geometrical and Physical Optics.**

Fundamental concepts in geometrical optics. Laws of image formation. Optical systems. Aberrations in optical systems. Photometry. Optical instruments. Interference, diffraction and polarization of light. The eye and color vision. Radiation. Interferometry. Three lectures and one (three-hour) laboratory period. Prerequisite Ph. 11, 12. *Four credit hours.*

**Physics 22.  
Heat and Thermodynamics.**

Temperature and thermometry. Laws of thermodynamics. Equations of state for gases. Specific heats. The transfer of heat by conduction and convection. Thermodynamic re-

lations and their use. Power cycles. The principle of the increase of entropy. Three lectures and one (three-hour) laboratory period. Prerequisite: Ph. 12. *Four credit hours.*

**Physics 41, 42.  
General Physics.**

A survey course covering Mechanics, Heat, Sound, Light, Electricity and Modern Physics. Elective for non-science Majors.

Two lectures and one (two hour) laboratory period. *Six credit hours.*

**Physics 43.  
Introduction to Astronomy.**

By means of lectures and illustration, coupled with some observation and laboratory work, the student is given a view of the universe in which we live. The course is developed by tracing the investigations which lead to the presently known picture of the world. Elective for non-science majors.

Two lectures and one laboratory period. *Three credit hours.*

**Physics 44.  
Introduction to Geology.**

Origin and age of the earth. Weather and climate. Terrestrial magnetism. Processes of

erosion. Glaciers and glaciation. Isostasy. Volcanism. Minerals. Rock structure. Earthquakes. Geologic history. Elective for non-science majors. Two lectures and one laboratory period. *Three credit hours.*

**Physics 51.**  
**Electricity.**

Electrostatics, magnetostatics, theory of dielectrics, the electric circuit, the magnetic circuit, inductance, capacity, alternating current, electric oscillations, instruments and measurements. Three lectures and one (three-hour) laboratory period. Prerequisite: Math. 22 and Ph. 12. *Four credit hours.*

**Physics 52.**  
**Introduction to Atomic Physics I.**

Atoms as components of matter. Magnetic, Optical and Electrical properties of atoms. Photons and X-Ray spectra. Three lectures and one (three-hour) laboratory period. Prerequisite: Math. 22 and Ph. 51. *Four credit hours.*

**Physics 55.**  
**Theoretical Mechanics.**

Linear oscillators. Motion in two and three dimensions. Lagrange's and Hamilton's equations. Motion of rigid bodies. Elastic vibrations. Flow of fluids. Three lectures. Prerequisite: Math. 22. *Three credit hours.*

**Physics 56.**  
**Electromagnetic Theory.**

Electrostatic and magnetostatic fields Solutions of Laplace's Equation Maxwell's Field Equations. Reflection and refraction of electromagnetic waves. Radiation. Microwave theory. Antennas and wave guides. Three lectures Prerequisite: Ph. 51. *Three credit hours.*

**Physics 61.**  
**Introduction to Nuclear Physics.**

Constitution of the nucleus. Natural radioactivity. Artificial nuclear disintegration. Alpha, Beta and Gamma decay. Nuclear reactions. Nuclear structure. Nuclear fission. Nuclear energy. Sources of nuclear energy. Isotope separation. Three lectures and one (three-hour) laboratory period. Prerequisite: Math. 22 and Ph. 51. *Four credit hours.*

**Physics 62.**  
**Electronics.**

A study of the characteristics and applications of vacuum and gas-filled thermionic and photoelectric tubes, cold cathode tubes, cathode-ray tubes, barrier layer photocells, and other electronic devices. Three lectures and one (three-hour) laboratory period. Prerequisite: Ph. 65. *Four credit hours.*

**Physics 65.**  
**Alternating Current Circuits.**

Sinusoidal single-phase and polyphase circuit analysis. Non-sinusoidal waves. Determination of circuit parameters. Transmission line calculations. Filters. Transient conditions. Three lectures. Prerequisite: Ph. 51. *Three credit hours.*

**Physics 66.**  
**Introduction to Atomic Physics II.**

Special theory of relativity. Wave mechanics. Schroedinger equation. Electron Spin and multiplet spectra. Exclusion principle. Quantum Statistical mechanics. Three lectures. Prerequisite: Physics 52. *Three credit hours.*

**Physics 73.**  
**Engineering Drawing.**

Isometric and oblique projections. Simple perspective projections. The construction of conics and rolled curves. Dimensioned free-hand sketches from machine parts and detail drawings from sketches. Two (two-hour) laboratory periods. *Two credit hours.*

**Physics 74.**  
**Descriptive Geometry.**

A study of the fundamental operations of orthographic projection. Lines, planes, solids, sections, developments tangent lines and planes, and intersections of surfaces of revolution. Two (two-hour) laboratory periods. *Two credit hours.*

**Physics 75.**  
**Seminar.**

The Physics Seminar, a circle of the faculty and the more advanced students majoring in physics, meets semi-monthly.

# Courses of Instruction

## DEPARTMENT OF **Sociology**

Professor: Facey (Chairman)

Associate Professor: Burke

Instructors: Fallon,\* Glass

The department stresses one development of a scientific approach to the understanding of human society. The student who majors in sociology, after his introductory course in general sociology, emphasizes methods of research, sociological theory and the close relationship between theory and research, in addition to empirical studies in specific areas of society.

The department maintains a Laboratory-Workshop which will serve students as a center for research operation, and also as a room for seminars and for general reference.

### **Sociology 11, 12, (21, 22). Introductory Sociology.**

The introduction to sociological analysis of social formations, processes, functions and control; culture and social change.

*Six credit hours.*

### **Sociology 55. Social Psychology.**

A description and analysis of the development of human behavior with major emphasis upon the individual. Both normal and abnormal patterns of behavior are analyzed from a bio-social framework of theory.

*Three credit hours.*

### **Sociology 62. Contemporary Sociological Theories.**

A descriptive and critical study of the development of sociological theory from Comte to the present.

*Three credit hours.*

### **Sociology 64. Industrial Sociology.**

The relationship between large-scale industrial organizations and the individuals who

work within them; the inception of labor unions, their emergence from and relations to industry; the interrelations of industry, union, and community as social systems.

*Three credit hours.*

### **Sociology 65. American Minorities.**

A description and analysis of minority-majority relations as part of the social structure of a society; theories of prejudice, inter-group relations, and current trends.

*Three credit hours.*

### **Sociology 66. The Family.**

The family as a social system, functionally and historically, with special reference to American urban family life. Family process, culture and personality development. The family and related social systems.

*Three credit hours.*

### **Sociology 71. The U.S.S.R.**

Structural-functional analysis of political, economic and related social systems of the Soviet Union; ideological and international significance of major developments.

*Three credit hours.*

\*On leave.

**Sociology 73.****Social Stratification.**

An integrated and comprehensible analysis of class structure in non-industrialized and industrialized societies from a structural-functional framework of reference; current evidence, research techniques, and future development of the field. *Three credit hours.*

**Sociology 76.****Cultural Anthropology.**

An introductory survey of the field. Com-

parative analysis of social organizations. Applied anthropology. Personality, culture and society. *Three credit hours.*

**Sociology 77, (51, 52).****Social Research.**

The design and the major techniques of research applied in group projects.

*Six credit hours.*

**Sociology 91, 92.****Honors Reading.**

*Six credit hours.*

# Courses of Instruction

## DEPARTMENT OF

## Theology

*Professors:* Casey, Doody, Haran, O'Connor, R. M. Sullivan, *Emeritus*

*Associate Professors:* Delaney (Chairman), Hugal, J. A. King, J. R. Sullivan, Walsh

*Instructors:* Barry, Carty, Maloney

Conscious of the obligations to engender in the student a vibrant, theoretical awareness, and to spark a productively-effective realization of Christ's truth, our heritage, the Theology Department feels that it has a unique role in a college curriculum. The long-range but omnipresent goal is to make each student alive to the fact that Catholicism is not merely a Creed, but a culture; that the study of its Theology is not merely an intellectual discipline, but the charting of a way of life, a program; that the appended courses outline not merely semester hours, but italicize an attitude toward life as a whole. More specifically, the general purpose of a Catholic Theology Course is to present, in coordinated fashion, a Creed, things to believe; a Cult, things to use in worship, (as, for example, the Liturgy and the Sacraments); and, finally, a Code, things to do, a pattern of morality. The Department of Theology develops its program from two basic premises: first, that our Theology is Christo-centric; and, secondly, that our tradition in scholarship is ultimately Ignatian, stamped with the character minted by the four hundred year history of the Society of Jesus, founded by St. Ignatius of Loyola.

Taking as our norm the oft-repeated dictum of St. Ignatius about Christ in the *Spiritual Exercises*, "that we may know Him more intimately, love Him more ardently and follow Him more closely," we endeavor to give a rounded view of Catholic Theology. Thus, we conceive knowledge of Christ to correspond roughly to Dogmatic Theology (Creed), love of Christ to have a not-too-strained relationship with Ascetic Theology (Cult) and the notion of serving to have a definite kinship with Moral Theology, and, by legitimate extension, to Canon Law (Code). All these branches of Theology are woven into whatever fragment of theological truth may be under scrutiny in a given semester, with the doctrine of the Mystical Body of Christ as the unifying element of the entire *corpus* of truth. We thus hope to provide an intelligent insight into the Christian mysteries, so that the ensuing light of faith will be genuinely and maturely intellectual, as befits the educated and articulate college graduate. This is an attempt to realize the purpose of the Theology Department, "That they may know Thee, the one, true God, and Jesus Christ Whom Thou hast sent."



### **Theology 11.**

#### **Introduction to Christo-centric Theology.**

Our consideration divides into two parts: first, an orientation for the study of Catholic Theology; secondly, a study of the Person of Jesus Christ. The orientation is, in turn, bipartite: first, *ascetic*, consisting in a Study of the Mass, the essence of Christian worship; secondly, *dogmatic*, which is a thorough exposition of the methodology of theological study. The second part of this course treats the Person of Jesus Christ by considering Old Testament prophecies and adumbrations about Him; and then makes a broad survey of the historical Christ as He appears in the pages of the New Testament. Due attention is paid to the political, social and religious background of the historical Christ.

*Two credit hours.*

### **Theology 12.**

#### **The Mission and the Church of Jesus Christ.**

From Christ's revelation of Himself in the Gospels, the course establishes that He is a Divine Legate, authentic Teacher for the whole world, Son of God, God. With this as a basis, there is established a triple, historical fact: first, the fact that God did give a public revelation; secondly, the fact that the God-Man established an authoritative Church; finally, that this Church was and is the one, holy, Catholic, apostolic Roman Church. The course continues by examining the EXTERNAL organization of the Church of Christ: its mission, its function, its infallibility, its indefectibility, its necessity for salvation. Both its ordinary and extraordinary teaching and ruling powers come under consideration and, in the light of recent developments, special treatment is given to Ecumenical Councils, historically and factually. *Two credit hours.*

### **Theology 21.**

#### **Christ Living in His Members.**

From the external organization of the Church, the transition to the same Church in its INTERNAL aspects is felicitious. Thus, we examine the doctrine of the Mystical Body of Christ, the Church as an ORGANISM (*versus* hierarchal organization), a living, vital entity with a Body made up of Christ and its members and its soul the Holy Spirit: in a word, the Church living in us and in Christ. Having treated the fact of its revelation and explained the nature, as far as possible, of the mystery of the Mystical Body, the transition to sacramental Theology is logical, because it is

the seven sacraments, instituted by Christ, which effect the grafting of the life of God, that organic life of a Body, onto the Catholic man. The course, then, with special emphasis on the relationship of the Sacraments to the Life of the Mystical Body, continues with Baptism, Confirmation, and The Eucharist: as a Solace (doctrine of the Real Presence), as a Sacrament (doctrine on Holy Communion) and as a Sacrifice (DOGMATIC Theology of the Mass.)

*Two credit hours.*

### **Theology 22.**

#### **Christ Living in His Members (Con't.)**

This course continues with the Dogmatic, Ascetic and Moral Theology of the remaining Sacraments: Penance, Extreme Unction and Holy Orders. Since it is the sacrament of the union of husband and wife that is the divinely-revealed symbol of the unity of the Mystical Christ, that is, of the union of Christ, the Head with His members, special emphasis is given to the Sacrament of Matrimony.

*Two credit hours.*

### **Theology 41.**

#### **Christ: The Incarnation and Redemption.**

Since the Divine Pedagogue, through His authoritative revelations in the New Testament, followed a definite order in teaching various truths, we adopt that order. The sacramental nature of the Church, the Mystical Body, leads us logically to the Mystery of the Incarnation, itself a sort of sacrament and the Incarnation in turn leads to the great redemptive gesture of Calvary, where Christ entered into possession of His Church, His Mystical Body. Because no consideration of Christ would be complete without due attention to the Mother of Christ, (both the physical Christ and the Mystical Christ, the Church), who is, of course, the Mother of God, our treatise concludes with a treatment of Mariology.

*Two credit hours.*

### **Theology 42.**

#### **Doctrine on Grace.**

From Calvary, where Christ merited all the supernatural grace that is, according to the dispositions of Divine Providence, to be channelled to men through the hands of His Blessed Mother, a consideration of Grace, (the principle of both supernatural life and supernatural operation in the Mystical Body), follows in logical progression. The adequate treatment postulates that special attention be paid to the Fall of Man with the resultant loss of grace. So

the course treats the background, setting, meaning and consequences of Original Sin, which is, in its essence, the privation of Sanctifying Grace. The Redemption of Christ having restored grace to mankind, the course proceeds by examining the nature, necessity, gratuity and effects of grace, both actual and habitual.

*Two credit hours.*

**Theology 51.**

**The Act of Faith, Trinity, Eschatology.**

Since the Divine Pedagogue revealed the Trinity through the Incarnation, that important mystery is subjected to critical examination by scientific, theological principles. Since, however, a mystery is involved here and in the doctrine of the Mystical Body and in the Incarnation, we make first an analysis of the Act of Faith: process, character, effects and necessity. The course concludes with considerations revolving about the final end of members of the Mystical Body: death, judgment, heaven, hell and purgatory.

*Two credit hours.*

**Theology 52.**

**Christian Churches in America.**

Since we live in a pluralistic, religious society, a treatment of the various mutilations and contusions (in the form of heresies and schisms) of the Mystical Body of Christ is the subject matter for the last semester of the obligatory Theology Course. Hoping to lay the basis for patient understanding and, perhaps, for intelligent dialogue, the course treats the following points: The division of Churches; the Ecumenical Movement; the Origin of the Orthodox Church(s); the Possibilities of Reunion; the men and causes of the Protestant Revolt; a comparative study of Catholic and Protestant doctrinal positions. History and condition of Protestantism; Protestant and Oriental sects on the American scene.

*Two credit hours.*

# Courses of Instruction

## GRADUATE DEPARTMENT OF **Chemistry**

Professors: *Fiekers (Chairman), Baril, Van Hook*  
Associate Professor: *Tansey*

The College conducts courses in Chemistry for Graduate Students leading to the Master of Science degree. Registration for these courses is open only to students who hold Bachelor's degrees from approved colleges and technical schools. Candidates for admission should file applications with the Chairman of the Chemistry Department before the fifteenth of March each year. In support of application each candidate should forward a transcript of his undergraduate record and two letters of recommendation should be supplied by former chemistry professors of the applicant. A supplemental completed transcript, with record of degree received, should be sent after graduation in the case of successful applicants. Information as to fellowships available in the graduate department should be requested of the Chairman for Chemistry.

### REQUIREMENTS FOR DEGREE

To become candidates for the Master of Science Degree students must fulfill the following conditions:

1. Attend and complete, with work of high quality, graduate courses amounting to not less than thirty semester credits of which at least ten must be obtained in laboratory courses.
2. Present an experimental thesis in their major field which shall include the results of original research and evidence of high scholarship.
3. Pass a one-hour oral, public examination conducted by the Chairman and Staff of the Department with at least one other member of the College Faculty to be appointed by the Dean.

Recommendation for the degree does not, however, follow automatically upon the completion of courses and examinations, but only on the affirmative judgement of the Department in each individual case.

## ADMISSION TO GRADUATE WORK

Applicants for graduate work should present a minimum of eight undergraduate credits in each of the following subjects: the differential and integral calculus (eight credits total), physics, inorganic chemistry, organic chemistry, analytic chemistry, and physical chemistry. Laboratory work should be included in all of these courses except the calculus. Other laboratory courses in chemistry are desirable. Accordingly applicants who do not present the following undergraduate courses may be required to take them in whole or in part, along with, or antecedent to, their regular graduate work. Cases will be judged individually from the record of undergraduate work.

Chemistry 58 Physical Chemistry III (See page 97)

Chemistry 61 Advanced Organic Chemistry I (See page 97)

When these courses of their equivalents are offered, only one year of residence will be the normal requirement for the acquisition of the Master of Science degree.

## GRADUATE COURSES

### Chemistry 201.

#### Advanced Inorganic Chemistry.

The lectures in this course comprise a study of the structure of inorganic compounds and the interrelations of elements and compounds according to the periodic chart. Valence studies are stressed and the ideas of Werner, Pauling, Price and current workers in the field are emphasized. The laboratory part of the course starts off with inorganic preparations and progresses into instrumental, analytic and advanced methods, such as liquid ammonia syntheses and the like. Industrial analysis is touched upon. Required of all graduate students. Two lectures and two triple-hours of laboratory per week for one semester.

*Five credit hours.*

### Chemistry 203.

#### Advanced Organic Chemistry.

The syllabus for this course will vary from year to year according to current trends in organic research and the special background that may be required to comprehend modern advances. Topics used in the past have included: advanced topics in stereochemistry, cyclization of organic compounds and organic heterocyclic chemistry, the chemistry of organic nitrogen compounds, the Diels-Alder Diene synthesis and the chemistry of carbohydrates, fats, oils and other natural products. Similarly the laboratory course, apart from the acquisition of organic chemical preparative techniques that are not generally realized in the undergraduate courses, is gen-

erally geared to current organic research in the department. Thus at times micro analysis for elements occurs. Required of all graduate students. Two lectures and two triple-hours of laboratory per week for one semester.

*Five credit hours.*

### Chemistry 207.

#### Chemical Thermodynamics.

This course develops the principles of chemical thermodynamics and includes applications. The fundamentals of statistical mechanics are also taught. Laboratory work comprises experiments in advanced physical chemistry with emphasis on thermochemistry. Required of all graduate students. Three lectures and two double hours of laboratory per week for one semester.

*Five credit hours.*

### Chemistry 208.

#### Reaction Rates.

A study of the kinetics of reactions in both homogeneous and heterogeneous systems, paralleled with experimental applications. Required of all graduate students. Three lectures and two double-hours of laboratory per week for one semester.

*Five credit hours.*

### Chemistry 209.

#### History of Chemistry I.

The historical development of fundamental chemical concepts up to and including the nineteenth century. Assigned readings. Required of all graduate students. One lecture per week for one semester.

*One credit hour.*

**Chemistry 210.**  
**History of Chemistry II.**

A study of contemporary developments and contemporary chemists. Assigned readings. Required of all graduate students. One lecture per week for one semester.

*One credit hour.*

**Chemistry 212.**  
**Department Seminar.**

One hour per week. *One credit for each semester.* Total credit not to exceed two credit hours.

**RESEARCH FOR MASTER'S DEGREE**

**Chemistry 213.**  
**Research for Master's Degree.**

Research of a fundamental nature is offered in organic and physical chemistry. Opportunity for the direction of undergraduate research in problems related to current graduate research is also afforded. Six hours per week for two semesters.

*Six credit hours.*

**Chemistry 214.**  
**The Literature of Chemistry.**

This is an informal course, with no record

or credit, which is adapted to the needs of the individual student or group. The course is introduced with a brief lecture, a conducted tour of the Library in the Department of Chemistry, assigned reviews of handbooks like Reid, Soule, Mellon and the patent policy handbooks of various companies. Literature searches are then assigned preferably in fields outside of the student's concentration. Eventually the student's library work in connection with his own research is carefully supervised.

**FELLOWSHIPS**

In 1926, the College of the Holy Cross established six graduate fellowships in Chemistry. At present each fellowship carries free board, room and tuition or its pecuniary equivalent. Fellows are required to spend from four to twelve hours per week in undergraduate labor-

atory instruction. These fellowships are offered to graduates of colleges or technical schools, who are properly qualified to undertake graduate work in chemistry. Applications must be filed with the Chairman for Chemistry by the fifteenth of March each year.

# Degrees Conferred

June 10, 1959

## HONORARY DEGREES

### DOCTOR OF LAWS

Morse Grant Dial  
George Kelly Hunton

### DOCTOR OF SCIENCE

David Myron Clark  
Oscar Zariski

### DOCTOR OF COMMERCIAL SCIENCE

James Aloysius Dolan  
William Aloysius Earls

### MASTER OF SCIENCE

John Charles Bianchi, Jr.	Joseph Thomas Murray
Henry Leo Jakubauskas	Normand Ernest Plante
Ronald James Kersey	Samuel Charles Sofia
	Raymond Bernard Wittke

### BACHELOR OF ARTS HONORS SUMMA CUM LAUDE

John Thomas Onuska, Jr.

### BACHELOR OF ARTS HONORS MAGNA CUM LAUDE

Kerry Henry Alley	Terence FitzPatrick Gilheany
Brian Patrick Donaher	Robert Leo Kane
	Joseph Francis Kett

### BACHELOR OF ARTS HONORS CUM LAUDE

Richard Donald Clarey	John Leo Mahoney
David Anthony Cooney	William John Mastroianni
John Cosgrove Corrigan Jr.	Peter Dennis McKenna
Thomas Fanning Coyle	Maximillian Leopold Mueller
Joseph John DeRose	Ralph Anthony O'Connell, <i>In Absentia</i>
George Raymond Hughes	George Peyton Royall, Jr.
Richard Paul Kane	Paul Richard Swarney
Stanley Edward Macora, Jr.	John Augustus Wise
Charles Michael Madden	

#### BACHELOR OF ARTS HONORS

Joseph Francis Bouffard  
Francis Michael Donovan

Albert Eugene Hill  
Francis Michael Tivnan, Jr.

#### BACHELOR OF ARTS MAGNA CUM LAUDE

Joseph Michael Civetta

Jerome Francis Downs

#### BACHELOR OF ARTS CUM LAUDE

Michael Allen Apicella  
John Anthony Calogero  
Edward Henry Cap  
Thomas John Craig  
Daniel Martin DeYoung  
Raymond Alexander Fidaleo  
Vincent Francis Garrity, Jr.  
Owen Bernard Gilman

Vincent Kevin Gilmore  
Joseph Andrew Jockel, Jr.  
Edmund Joseph Kelly  
Norman John Kramer  
Daniel Arthur Nicholson  
Charles Edward Riordan  
Thomas Noel Troidle  
Robert Aloysius Welsh, Jr.

Neal Edward Winn

#### BACHELOR OF ARTS

Edward Joseph Alzapiedi  
Peter Dominic Archey  
William Joseph Baroody, Jr.  
George Curtis Barry  
Reynold Joseph Baumstark  
Albert Gregory Bergen  
Robert James Blanch  
Joseph Peter Bouvier  
Sherman Joseph Laurier Brown, Jr.  
Daniel Timothy Buckley, Jr.  
Thomas Andrew Cahill  
Francis David Carbone  
Francis Xavier Carmody  
Walter James Case  
John Ernest Cavagnaro  
Joseph Lawrence Cavanaugh  
George Philip Chave  
Richard McCourt Clark

Andre John Codispoti  
Donal Carl Collimore  
John Francis Creamer  
Richard Joseph Cromie  
Robert Francis Cullen, Jr.  
Robert Paul D'Amour  
Anthony Bruce Dean  
Donald Eugene Dean  
Gregory James Didden  
John Wallace Dondanville  
Raymond Anthony Doyle  
Joseph Michael Farrell  
Edgar Hugh Fay, Jr.  
Gregory Daniel Fitzpatrick  
Cyril Alfred Flynn  
Edward Austin Foley, Jr.  
Francis Joseph Foley, Jr.  
Patrick Francis Foley

Warren Nicholas Gaffney, Jr.  
 Donald Peter Galamaga  
 Thomas Edward Garity  
 John Francis Gaudet  
 Thomas Verne Giles  
 David Joseph Gilmartin  
 Paul Joseph Godby  
 Robert Joseph Goyette  
 Thomas William Grace  
 James Charles Griffin  
 Frank Michael Groom  
 Eugene Francis Haggerty, Jr.  
 Raymond Paul Harris, Jr.  
 Martin Francis Harrity  
 James Vincent Hennessy  
 John Joseph Hintlemann  
 John Noel Kane  
 James Joseph Keegan, Jr.  
 Robert Augustine Keleher  
 Arthur Reid Kenedy, Jr.  
 James Andrew Kennedy, Jr.  
 William Joseph Lally, Jr.  
 Robert Edmond Landry  
 Thomas Francis Lee  
 Joseph Xavier Loftus  
 Francis James Luongo  
 David Andrew Luttinger  
 James Anthony Lynch  
 Kelvin Laurence MacKavanagh  
 Lawrence Higgins Madaras  
 William Blake Maher  
 William Paul Maloney  
 Gilbert Emile Marcotte  
 Arthur Richard Matthews, Jr.  
 Edward Martin Matz, Jr.  
 Bruce Anthony McAllister  
 John Vincent McAuliffe  
 J. Mark McCarthy  
 Paul Joseph McElligott  
 Richard Henry McKenna  
 William Heyl McKenna, Jr.  
 John Robert Mellert, *In Absentia*  
 Joseph Alfred Merchant  
 James Edward Mischler

Augustus John Mitchell  
 Nicholas Salvatore Molinari  
 Joseph Howard Moore  
 William Jasper Moore  
 Charles Kenneth Morano  
 Pasquale Philip Muccigrosso  
 Gerard Francis Norton, Jr.  
 Rickard Thomas O'Neil  
 Thomas Whyte O'Neil  
 Daniel Joseph O'Neill  
 Michel Jean Orceyre  
 John Joseph Ormond  
 Eugene Anthony O'Rourke  
 Terence James O'Toole  
 Harold Joseph Parrott  
 Joseph Edwin Peters  
 Harry Richard Piet  
 John Thomas Quinn  
 Edward Francis Reid  
 John Henry Rollins  
 Francis Stephen Ruddy  
 Gerard Philip Salvatore  
 James Michael Samway  
 Timothy Francis Scanlon  
 Daniel Joseph Sheahan  
 William Robert Sheehy  
 John Allen Shields  
 Charles Joseph Sigmund  
 Edmund Raymond Sledzik  
 Charles Gavin Stemwedel  
 Joseph Thomas Sweeney  
 Michael Thomas Tomaino  
 Paul James Tougas  
 William Richard Toussaint, Jr.  
 David Rhame Traynor  
 Arthur Francis Tubridy, Jr.  
 Michael James Tully  
 Arthur Charles Ungerer, II  
 James Oliver Vosseller, III  
 Arthur Joseph Wallingford, Jr.  
 Charles George Wildman, Jr.  
 John Paul Williams  
 Edward Bernard Wotycha  
 Andrew Robert Wright, Jr.



### BACHELOR OF SCIENCE MAGNA CUM LAUDE

Jan David Blais  
Matthew Anthony Kass

John Patrick Laschenski  
Robert John O'Connell

### BACHELOR OF SCIENCE CUM LAUDE

John Victor Agurkis  
Donald Robert Black  
Jerald Dennis Buckley  
Jose Emilio Cardell  
Peter John Connell  
Howard Edward Dalton  
Robert Vincent Deiana  
Peter Francis Devaney, Jr.  
Joseph David DiZoglio  
David Christopher Donohue

Robert Thomas Doyle, Jr.  
Roland Edmond Dufault  
Joseph Raymond Fordham  
Raymond Paul Grenier  
James Timothy Higgins  
Robert Stephen Holgate  
James Thomas Leonard  
William Joseph McCormick, Jr.  
Richard Joseph Murphy  
Francis John Stewart

William Francis Welsh

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Michael Joseph Ambrose  
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Anthony Donald Bavaro  
Stanley Andrew Beattie  
Richard James Beatty  
Mortimer Devine Beck, Jr.  
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John Richard Bomba  
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Paul Joseph Buckley

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James Michael Canavan  
Francis Anthony Capodilupo  
John Francis Carrington  
James William Carter  
Ronald Anthony Caruso  
Louis Michael Carusone  
Richard John Cea  
Walter Powers Chase  
Ronald Aloysius Chung, *In Absentia*  
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Paul Dennen Clark  
Melvin Bernard Clifford, Jr.  
John Steven Cole  
Paul Joseph Collins  
Frederick Joseph Commentucci  
James Clinton Conklin  
John Thomas Connerty, Jr.  
William Joseph Cooney  
Hugh Thomas Corcoran

David Gideon Cormier  
 Joseph Philip Corona  
 John Dennis Corrigan  
 John Harold Cranston  
 Thomas Joseph Cullinane, Jr.  
 John Basso Cummings  
 Thomas Francis Cummings, Jr.  
 John Russell Cunniff  
 Philip Tracy Cunningham  
 Frederick Burke Darney  
 John Crosby Darrow  
 Gordon Leo Datka  
 Jerome Joseph Day, Jr.  
 Robert Michael Defino  
 Harold Francis Deitz  
 Denis Peter Delaney, *In Absentia*  
 Daniel Paul Dennehy  
 Anthony William DePaul, Jr.  
 George Otto Deshensky  
 John Thomas Dillon, Jr.  
 Joseph Leonard Dixon  
 Richard Paul Donohue  
 James Peter Doonan  
 Leonard Robert Dorrien  
 Thomas Coady Doyle  
 Jerome Vincent Driscoll, Jr.  
 John Edward Driscoll, Jr.  
 Thomas Henry Drohan  
 Edward John Duffy, Jr.  
 John Joseph Dumphy  
 Edward Anthony Dunn  
 John Anthony Durkin  
 Hugh Henry Coyle-Earls  
 Martin Barry Eberhardt  
 Charles Francis Egan, Jr.  
 James Mario Farino  
 James Christopher Farrell  
 Robert Anthony Fassnacht  
 William David Ferguson, Jr.  
 John Kahl Figge  
 Albert Mario FioRito  
 Raymond Joseph Fitzpatrick, Jr.  
 John Stephen Fleischer  
 Michael Harrington Flynn

Edward Charles Furey  
 John William Gainor  
 Donald Franklin Gelnow  
 James Herbert Gensheimer  
 Hugo Ernani Giargiari, Jr.  
 David Long Graham  
 Thomas Winand Greene  
 John William Hanifin, Jr.  
 Robert Leo Harrington  
 Edward Marcus Hayes, Jr.  
 Jerome Vincent Hayes  
 James Leo Healy  
 Joseph Francis Hennessey  
 James Joseph Herlihy, Jr.  
 Francis Joseph Hewitt  
 Jerome Edward Hickey  
 Daniel George Higgins  
 Kenneth James Hohl  
 John William Hornett  
 John Bernard Houston  
 Harvey Robert Hoyt  
 John Thomas Hurley  
 Gerald William Hyland  
 Joseph Thomas Impellitteri  
 Hayes Edward Irons, Jr.  
 Francis Joseph Issa  
 Charles Joseph Jackman  
 William Frederick Jacques, Jr.  
 Charles Herbert Johnson  
 Thomas Arthur Johnson  
 Robert Paul Joyce  
 Thomas Patrick Joyce  
 Anthony Bruce Judah  
 David Watson Judd  
 Stephen Michael Kiernan  
 Ralph Burnett Kinney, Jr.  
 Robert Bellarmine Kinney  
 Richard Raymond Knoepfel  
 Edward Stanley Krysiak  
 John Thomas Kuesel, *In Absentia*  
 Thomas Cornelius Lane  
 James Anthony Laria  
 Barry Lloyd LaVallee  
 Leon Richard LeClair

Charles Robert Lennon  
 Raymond Henry Lepoutre  
 Mark Francis Lilly  
 Ronald Paul Liptak  
 David Rose Llewellyn  
 William Angelo Macchi  
 J. Richard MacMurray  
 Thomas Francis Madden, *In Absentia*  
 John Andrew Malloy  
 R. Anthony Malone  
 Robert James Maloney  
 Robert Maurice Maloney  
 Jay Albert Manasas  
 William Arthur Maple  
 William Henry Marrs  
 John Francis Mason  
 Charles Henry McCabe, Jr.  
 Florence Joseph McCarthy, Jr.  
 Kevin James McCarthy  
 Edward Leo McDermott  
 Francis Charles McGourty  
 Richard John McGovern  
 William Aloysius McKenna  
 Michael James McLoughlin  
 Paul Edward McManus  
 Paul Bernard McNellis  
 Edward Joseph McTighe  
 Robert Charles Meehan  
 Edward Thomas Mitchell  
 Martin Morgan Mitchell, Jr.  
 James Joseph Molloy, Jr.  
 James Francis Moon  
 Thomas Mary Mooney  
 John Patrick Moriarty  
 Frederick Eugene Morrissey  
 John Blase Mullen  
 John Edward Mullen, Jr.  
 George Francis Murphy  
 James Edward Murphy  
 John Francis Murphy, III  
 Raymond Arthur Murphy  
 Walter Leonard Murphy  
 Albert Ernest Nevins, Jr.  
 Craig Thomas Nevins

Dennis Ward Noschese  
 Andrew Anthony Nowak  
 John Robert O'Brien  
 Kenneth Robert O'Brien  
 Thomas Michael O'Brien  
 John Michael O'Connell, III  
 Richard Dennis O'Connor  
 Arthur Jerome O'Dea  
 William Joseph O'Herron, *In Absentia*  
 Richard Michael O'Shea, *In Absentia*  
 James William Payne, III  
 Joseph Thomas Peattie  
 Robert Anthony Perchard  
 David Bonfiglio Perini  
 Alfonso John Perna  
 Joseph Frederick Persechino  
 Peter John Pfaff  
 Anthony Rocco Piro  
 John Martin Power  
 Francis Paul Quinn  
 Bernard John Quirk  
 William Edward Quirk, IV  
 Lawrence Andrew Rancourt  
 Robert John Reidy  
 Joseph Anthony Ricci  
 John Michael Ricciardi  
 Lionel Albert Richard  
 Francis Dolan Riopel  
 John Edward Ritz  
 Allen Henry Rosenquest  
 John Joseph Rowe  
 John Paul Royston  
 John Joseph Scanlan  
 Gerald Griffin Sheehan, Jr.  
 Thomas Joseph Sheehan  
 Thomas Henry Sheehy  
 Jude Thaddeus Smith  
 Joseph Timothy Stagnone  
 David Francis Stecchi  
 Charles Joseph Stevens, Jr.  
 Peter Blake Stevens  
 John James Stout, Jr.  
 George Dennis Sullivan  
 Daniel Thomas Sweeney

Walter Thomas Towner  
 Robert Louis Turain  
 Patrick Charles Valenti  
 James Ford Van Deusen  
 Jose Enrique Villares, *In Absentia*  
 Francis Nicholas Vita  
 William Alan Walker  
 Joseph Vincent Wallace  
 David Ignatius Walsh

John Joseph Walsh  
 Lawrence Joseph Welch  
 Richard Curtin Welsh  
 Paul Joseph Wetzel  
 John Joseph Whelan  
 Robert Francis Wickstrom  
 Barry Arnold Worfolk  
 Edwin Norbert Zahm, Jr.  
 John Joseph Ziskowski

#### COMMISSIONED AS ENSIGNS IN THE UNITED STATES NAVY

Joseph George Alavosus, Jr.  
 Michael Joseph Ambrose  
 William Joseph Barood, Jr.  
 Bernard Albert Barufaldi  
 Stanley Andrew Beattie  
 Albert Gregory Bergen, Jr.  
 Joseph Francis Boufford  
 Francis Xavier Bruton, Jr.  
 Richard William Budinger  
 Francis David Carbone  
 James William Carter  
 Arthur Angelo Ciocca  
 John Steven Cole  
 Jerome Joseph Day, Jr.  
 Anthony William DePaul, Jr.  
 James Peter Doonan  
 Robert Thomas Doyle, Jr.  
 Thomas Coady Doyle  
 John Anthony Durkin  
 William David Ferguson, Jr.  
 John Stephen Fleischer  
 Patrick Francis Foley  
 Donald Peter Galamaga  
 John Francis Gaudet  
 Thomas Verne Giles  
 James Charles Griffin  
 Raymond Paul Harris, Jr.  
 Harvey Robert Hoyt  
 Joseph Andrew Jockel, Jr.  
 John Noel Kane  
 Matthew Anthony Kass

James Joseph Keegan, Jr.  
 Arthur Reid Kenedy, Jr.  
 James Andrew Kennedy, Jr.  
 John Patrick Laschenski  
 Barry Lloyd LaVallee  
 Mark Francis Lilly  
 Robert James Maloney  
 William Paul Maloney  
 Richard John McGovern  
 Peter Dennis McKenna  
 James Edward Mischler  
 James Joseph Molloy, Jr.  
 Raymond Arthur Murphy  
 Craig Thomas Nevins  
 Daniel Arthur Nicholson  
 Dennis Ward Noschese  
 Richard Dennis O'Connor  
 Rickard Thomas O'Neil  
 Thomas Whyte O'Neil  
 John Thomas Onuska  
 James William Payne, III  
 Joseph Frederick Persechino  
 Harry Richard Piet  
 John Thomas Quinn  
 William Edward Quirk, IV  
 Lionel Albert Richard  
 John Paul Royston  
 Joseph Timothy Stagnone  
 Peter Blake Stevens  
 Francis John Stewart  
 William Richard Toussaint, Jr.

Thomas Noel Troidle  
Arthur Francis Tubridy, Jr.

Patrick Charles Valenti  
James Oliver Vosseller, III

COMMISSIONED AS SECOND LIEUTENANTS IN THE  
UNITED STATES MARINE CORPS

James Francis Anderson  
John Basso Cummings  
Anthony Bruce Dean  
Martin Barry Eberhardt  
Edgar Hugh Fay  
Donald Franklin Gelnow  
Vincent Kevin Gilmore

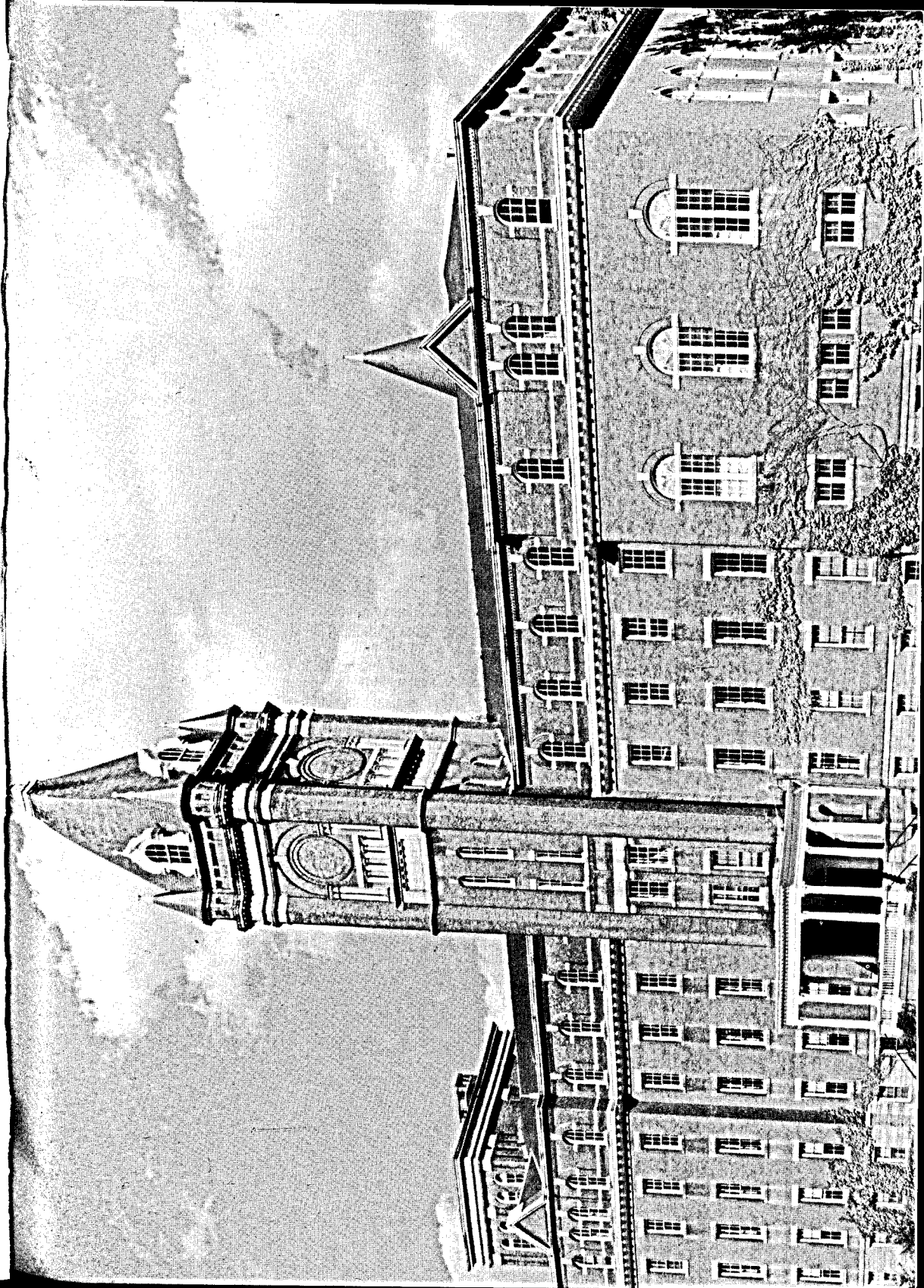
Robert Leo Harrington  
John William Hornett  
J. Mark McCarthy  
John Robert O'Brien  
John Henry Rollins  
David Francis Stecchi  
David Rhame Traynor  
John Joseph Whelan

COMMISSIONED AS SECOND LIEUTENANTS IN THE  
UNITED STATES AIR FORCE RESERVE

Kerry Henry Alley  
\*Donald Robert Black  
John Richard Bomba  
Joseph Peter Bouvier  
\*Arthur William Brodeur  
Denis Peter Delaney  
George Otto Deshensky  
Gregory James Didden  
John Edward Driscoll, Jr.  
\*Joseph Michael Farrell  
James Herbert Gensheimer  
Raymond Paul Grenier  
Kenneth James Hohl  
Gerald William Hyland  
Raymond Henry Lepoutre  
\*Stanley Edward Macora, Jr.

Thomas Francis Madden  
\*R. Anthony Malone  
Paul Edward McManus  
Paul Bernard McNellis  
Thomas Mary Mooney  
John Blase Mullen  
John Edward Mullen, Jr.  
James Edward Murphy  
Kenneth Robert O'Brien  
Daniel Joseph O'Neill  
Edward Francis Reid  
Francis Dolan Riopel  
John Joseph Sheehan  
Robert Louis Turain  
Andrew Robert Wright, Jr.

*\*Distinguished Air Force ROTC Graduates who have been selected for Regular Air Force Commission.*



## **STUDENT SPEAKER**

Valedictory Address ..... William J. McCormick, Jr.

**DEGREE CONFERRED JUNE 30, 1959**

**BACHELOR OF SCIENCE**

William M. Glasheen

**DEGREES CONFERRED SEPTEMBER 4, 1959**

Robert J. Colby

William R. Keyes

Thomas C. Killion, Jr.

Michael N. Marty

Thomas J. Moynihan

Richard P. Tennyson

## CONVOCATIONS

DEGREE CONFERRED, *Honoris Causa*

at a Special Convocation

held on May 23, 1959:

DOCTOR OF COMMERCIAL SCIENCE

Joseph Edward Sullivan

DEGREE CONFERRED, *Honoris Causa*

at a Special Convocation held on November 2, 1959:

DOCTOR OF SCIENCE

Thomas Anthony Dooley

DEGREES CONFERRED, *Honoris Causa*

Convocation on the occasion of the dedication of  
Haberlin Hall, Science Building, on December 8, 1959:

DOCTOR OF LAWS

Francis Joseph McGrath

DOCTOR OF SCIENCE

Daniel Linehan

DOCTOR OF COMMERCIAL SCIENCE

Milton Prince Higgins



# Awards

June 1959

## The Bellarmine History Medal

The Bellarmine Gold Medal, the gift of Mr. and Mrs. Edward J. McGratty, Sr., in memory of Patrick H. and Elizabeth L. McGratty, for the best historical essay on Colonial America.

Awarded to: John P. Thayer, of the Class of 1962.

## The Bourgeois Award

The Bourgeois French Prize, the income on \$1,000, established in 1947 by Albert L. Bourgeois, Esq., '22, in memory of his late father, Pierre Bourgeois, and of his mother, Fabiola Bourgeois, to be awarded annually for the best essay on a subject relating to the French or their descendants in the United States.

Awarded to: Daniel M. DeYoung, of the Class of 1959.

## The Nellie M. Bransfield Prizes

The Nellie M. Bransfield Award, founded in 1946, by the will of the late Nellie M. Bransfield, income on \$2,000, to be awarded annually as prizes for excellence in elocution among the undergraduates.

Awarded to: John A. Shields, of the Class of 1959.

## The Frank D. Comerford Prize

The Frank D. Comerford Silver Medal, founded in 1942 by the management and employees of the Boston Edison Company, to be awarded annually at Commencement Exercises to a student of the graduating class for excellence in public speaking.

Not Awarded.

## The Crompton Scientific Medal

The Crompton Gold Medal, founded in August, 1875, by George Crompton, Esq., for the best Scientific Essay submitted during the school year.

Not Awarded.

#### **The John J. Crowley Prize**

The John J. Crowley Purse (income on \$1,000.00) awarded annually to provide purse or prize for best essay on any religious, literary, historical, economic or scientific subject.

Awarded to: Paul J. Collins, of the Class of 1959.

#### **The Patrick F. Crowley Memorial Prize**

The Patrick F. Crowley Purse, the income on \$1,000.00, founded in July, 1947 by Bridget T. Crowley, in memory of her brother, Patrick F. Crowley, to be awarded annually for proficiency in debating and oratory.

Awarded to: Shane MacCarthy, Jr., of the Class of 1960.

#### **The DeValera History Purse**

The DeValera Purse (income on \$1,000.00), the gift of Daniel H. Coakley, for the best essay on a subject taken from Irish history.

Awarded to: E. Neil Jensen, of the Class of 1962.

#### **The Fallon Debating Prize**

The Fallon Debating Prize, founded in 1901 by Rev. John J. Fallon of the Class of 1880, (income on \$1,000.00).

Awarded to: William J. Madden, '61 and John D. Gottlick, '62.

#### **The Flaherty Prize in History**

The Flaherty Gold Medal, founded in May, 1903, by Patrick W. Flaherty, Esq., to be awarded annually for the best essay on a subject selected by the Faculty.

Not awarded.

#### **The Flatley Philosophy Prize**

The Flatley Gold Medal, founded in 1890 by the late Reverend Michael F. Flatley of the Class of 1865, to be awarded annually to the student attaining the highest average in the philosophy courses of senior year.

Awarded to: Bruce A. McAllister and John T. Onuska, Jr., of the Class of 1959,  
*Ex Aequo.*

#### **The Reverend William F. Hartigan Medal**

The Reverend William F. Hartigan Medal, founded in May, 1932, by Josephine C. Hartigan in memory of her brother, the Reverend William F. Hartigan, to be awarded annually to a student of the graduating class submitting the best essay on a subject in Religion.

Awarded to: James V. Hennessy, of the Class of 1959.

#### **The Kavanagh Award**

The Kavanagh Medal, established in 1952 by the late Right Reverend Michael P. Kavanagh of the Class of 1893, to be awarded annually to the student writing the best original essay on some phase of Catholic Art or Christian Archaeology.

Not Awarded.

#### **The Killeen Prize in Chemistry**

The Edward V. Killeen, Jr. Chemistry Purse, for general excellence throughout the Bachelor of Arts premedical course in chemistry.

Awarded to: Joseph M. Civetta, of the Class of 1959.

#### **The Kranich Prize**

The Kranich Gold Charm, the gift of the Kranich Brothers, Inc., of Worcester, Massachusetts, to be awarded annually to the student contributing the best essay to "The Purple".

Awarded to: Joseph F. Kett, of the Class of 1959.

#### **The John C. Lawlor Memorial Prize**

The John C. Lawlor Gold Medal, the gift of the Class of 1911, to perpetuate the memory of Dr. John C. Lawlor of the Class of 1911, to be awarded annually to a letterman of the graduating class adjudged the outstanding student and athlete during the college course.

Awarded to: Joseph H. Moore, of the Class of 1959.

#### **The William E. Leahy Award**

The William E. Leahy Award in memory of William E. Leahy of the Class of 1907, to the outstanding debater in the B.J.F. Debating Society. This memorial prize consists of a medal and a cash award of \$100.00.

Awarded to: Charles R. Comeau, of the Class of 1960.

#### **The Leonard Purse**

The Leonard Award, founded in 1951 by the will of the late Reverend John F.

Leonard, to be awarded annually for proficiency in oratory, debating or like competition.

Awarded to: Wilfred R. Pflucker, of the Class of 1961.

#### **The Markham Memorial Prize**

The Markham Memorial Prize consisting of a Gold Medal and a Purse of \$100.00, established in 1947 by the Most Reverend Thomas F. Markham, D.D., of the Class of 1913, in memory of his parents, James and Honora Hickey Markham, to be awarded annually to a student of the graduating class designated by the Dean as having the highest rank of academic proficiency in the philosophy course of Natural Theology.

Awarded to: John P. Laschenski, of the Class of 1959.

#### **The McMahon History Purse**

The McMahon Purses, three in all, founded in 1927 by the late Right Reverend Monsignor John W. McMahon of the Class of 1867, to be awarded annually for the best essays on the History of the Catholic Church in New England.

Awarded to: Arthur R. Matthews, Jr., of the Class of 1959.

#### **The Nugent Physics Medal**

The Nugent Gold Medal, founded in June, 1894, by the Reverend Edward Evans Seagrave to perpetuate the memory of his ward, John T. Nugent, who died at the College in 1893, awarded annually for general excellence throughout the course in Physics.

Awarded to: John P. Laschenski, of the Class of 1959.

#### **The O'Connor Debating Prize**

The Joseph J. O'Connor Purse, income on \$1,000 the gift of the late Joseph J. O'Connor of the Class of 1909.

Awarded to: Shane MacCarthy, Jr. and Charles R. Comeau, of the Class of 1960.

#### **The Mrs. Kate C. Power Medal**

The Mrs. Kate C. Power Medal, founded in 1942 by the will of the late Mrs. Kate C. Power, to be awarded to the highest ranking student in the College of the Holy Cross in the Bachelor of Arts (with Honors) Course in the Sophomore year.

Awarded to: George M. Pepe, of the Class of 1961.

#### **The Purple Prize**

The Purple Purse, the gift of the College, to be awarded annually to the student contributing the best poem to "The Purple".

Awarded to: John P. Hackett, of the Class of 1961.

#### **The Reverend John F. Redican Prize**

The Reverend John F. Redican Medal, donated by a friend in memory of The Reverend John F. Redican, '78, awarded annually to the Junior (Honors Course) with highest rank in Philosophy.

Awarded to: John M. Greaney, of the Class of 1960.

#### **The Reilly Memorial Prize**

The James H. Reilly Memorial Purse, the income on \$600, founded by Joseph J. Reilly of the Class of 1904 and immediate relatives, to be awarded annually to the student contributing the best short story to "The Purple".

Awarded to: James F. Southwood, of the Class of 1961.

#### **The Freeman M. Saltus Prize**

In memory of Freeman M. Saltus, awarded for excellence in essays on labor or economics.

Not Awarded. Last awarded in 1958 to John P. Moriarty, of the Class of 1959.

#### **The Strain Philosophy Prize**

The Strain Gold Medal founded in June, 1877, to be awarded annually for the best essay on a subject selected from the field of philosophy.

Awarded to: Jan D. Blais, of the Class of 1959.

#### **The Lieutenant William Peter Sullivan, Jr. Medal**

The Lieutenant William Peter Sullivan, Jr. Medal, the gift of Mrs. William P. Sullivan, Jr., in memory of her late husband, Lieutenant William Peter Sullivan, Jr., U.S. Naval Reserve, of the Class of 1939, to be awarded annually to the member of the varsity track team who, by vote of his fellow team members, is adjudged to have merited this award.

Awarded to: Richard P. Donohue, of the Class of 1959.

**The Varsity Club Norton Purse or Medal**

(Income on \$500.00) for an athlete in A.B. with Honors Course.

Not Awarded.

**The Worcester County Alumni Sodality of Our Lady Medal**

Awarded to the member of the Students' Sodality chosen as the outstanding sodalist of the year.

Awarded to: Nicholas S. Molinari, of the Class of 1959.

**The John E. Wickham Memorial Prize**

The John E. Wickham Gold Medal, founded in 1939 by Mrs. Nicholas Wickham of Lee, Massachusetts, in memory of her son, The Reverend John E. Wickham of the Class of 1899, to be awarded annually to the highest ranking student of the graduating class.

Awarded to: John T. Onuska, Jr., of the Class of 1959.

# College Organizations

## THE LEAGUE OF THE SACRED HEART

The League of the Sacred Heart was established at the College on the first of November, 1888. It has ever since been a most efficacious means of propagating among the students the practice of a most tender devotion to the Sacred Heart of Our Lord.

## THE SODALITY OF OUR LADY

The Sodality of Our Lady was organized on the eighth day of December, 1844, and aggregated to the Roman Prima Primaria on the tenth day of April, 1846, with the title of the Immaculate Conception, and under the patronage of St. Aloysius. The Sodality exists for boarding and day students alike, and has for its object the realization of the fullness of the Christ-life through Mary, by means of the solemn consecration of its members, and their active dedication to the Sodality's regulated "way of life" in their respective vocations after the completion of their college days.

## ST. JOHN BERCHMAN'S SANCTUARY SOCIETY

The St. John Berchman's Sanctuary Society has for its object the fostering of a special devotion in the assisting at the altar in all religious ceremonies.

## THE B. J. F. DEBATING SOCIETY

Named in honor of the Most Reverend Benedict Joseph Fenwick, the founder of Holy Cross College, the B.J.F. Debating Society was organized in 1846, and has nurtured a tradition of excellence in the art of public speaking. Students develop the talent to express their ideas fluently and logically, through an extensive program of intra-mural debating, guest speakers distinguished in the field of the national debate topic and intercollegiate debate tournaments. Individual guidance is offered to the novice in the intramural program. The opportunity of representing the College at intercollegiate tournaments is given to those whose achievement in the intramural contests merits it. The B.J.F. annually sponsors the Bishop Healy High School Debating Tournament in the interest of promoting forensics in both the public and parochial secondary schools of the New England-New York area. Exhibition debates are conducted before social and cultural groups, neighboring high schools and colleges. Membership in the B.J.F. Debating Society is open to any student in the College.

### THE MATHEMATICS CLUB

The Mathematics Club held its first meeting in 1946, and has functioned continuously since that time. It aims to promote the study of pure and applied mathematics and to communicate the spirit which guides the mathematical activity of the present day. The programs usually consist of lectures by mathematicians which are preceded by informal discussions with the major students of the Department. Occasionally lectures are given by outstanding students or members of the faculty. Meetings are open to all interested persons of the college community regardless of their field of specialization.

### THE CAMERA CLUB

The Camera Club, open to all students, provides its members with dark-room facilities for developing and printing their own films, and with technical assistance when needed. Many of the members find places on the photo staffs of the campus publications. The Club conducts annual photo contests for the student body, and from time to time sponsors instructional talks in the field of picture-taking.

### POLITICAL CLUBS

One of the objects of a liberal education has been the formation of the "good citizen." To effect this aim, political clubs representing the Democratic and Republican Parties have been inaugurated. An enlightened participation in such clubs is calculated to make the student aware of the complexities and subtleties of our system of government by the people. The immediate aim of these clubs is to stimulate interest, develop capacity and encourage participation of "better minds for better politics."

### THE DRAMATIC SOCIETY

The Holy Cross Dramatic Society has been functioning since the establishment of the College. It sponsors a varied program in the production of Shakespeare, modern drama and original one-act plays.

### THE AQUINAS CIRCLE

The Aquinas Circle is an organization of Seniors and Juniors interested in further study and discussion of philosophical problems and their correlation with modern thought in science and literature. The Circle meets twice a month.

### THE CROSS AND SCROLL CLUB

The Cross and Scroll Club, originally formed as the Hellenic Academy for the promotion of interest in classical studies, has through the years expanded its aims to include topics of Literature, Art and General Culture.



Besides its group meetings the Club sponsors public lectures pertinent to Christian Culture and Education.

#### **THE MUSICAL CLUBS**

Two separate organizations foster and develop musical talent among the students—the College Glee Club and the College Orchestra and Band. The purpose of the Glee Club is to instill and promote among its members a love and appreciation of the truly beautiful in music through the medium of choral singing. A program of concerts throughout the year is an incentive for enthusiastic interest. Students participating in the activities of the College Orchestra and Band receive valuable experience in orchestral work. For public concerts this organization collaborates with the Glee Club.

#### **THE COLLEGE CHOIR**

The College Choir was organized to assist at Chapel Services and to promote devotion by acquainting students with the treasury of Church music.

#### **THE BIOLOGY SOCIETY**

The Biology Society, composed of students majoring in biology, provides its members with the opportunity to study more intensively and critically some of the problems of that science.

#### **THE CROSS AND CRUCIBLE CHEMISTS' CLUB**

This club is devoted to the advancement of chemistry and the development of social and professional relations among its members. The club was founded in 1927 and reorganized in 1947. It is open to all undergraduate students of chemistry. The club is a Chapter of Student Affiliates of the American Chemistry Society and publishes the Cross and Crucible, a monthly chemical magazine for undergraduates.

#### **THE INTERNATIONAL RELATIONS CLUB**

This Club has for its purpose a thorough understanding of the principles that motivate states in their conduct with one another. It seeks a deep knowledge of the causes that produce international tensions. Its practical objective is to be able to offer a sound policy or policies that can bring about international peace.

#### **THE PHYSICS SOCIETY**

The Physics Society, composed of students majoring in physics, has as its purpose the development of deeper and wider interest in the subject. Meetings are held weekly. Speakers from the faculty, student body and industry discuss aspects of pure physics or its applications. The publication of the Society is The Cross-Product.

### THE LABOR PROBLEMS ACADEMY

The Labor Problems Academy, open to students majoring in Economics, was organized in 1935 to encourage the study of Catholic principles applicable to the labor problems in the United States. This academy was organized with a threefold purpose: to stimulate personal research and individual interest in the historical development of, and contemporary relationships among capital, management, labor, and the community in these problems; to obtain and classify scientific and unbiased pamphlets, periodicals, and similar reference materials for use by the Faculty, members of the Debating Societies and Lecture Teams, members of the Academy, and other undergraduates interested in these problems; to engender an appreciation of the pronouncements upon the moral relationships between capital and labor contained in Papal Encyclicals.

### THE HISTORY ACADEMY

The History Academy, composed of instructors and students in history, has for its object the increase of interest in the study of history. It holds bi-weekly meetings at which are read and discussed essays on various topics taken from the field of history.

### THE MISSION UNIT

The Holy Cross Unit of the Mission Crusade was established in 1921. Relief of the Missions is encouraged by donations of the students. Students contribute to foreign and home missions large sums of money, large quantities of Catholic papers, altar supplies, books and clothing.

### THE PURPLE KEY

It is the purpose of this organization to foster devotion, loyalty, and enthusiasm for Alma Mater. The Purple Key sponsors student activities, plans and conducts student manifestations of the spirit of Mount St. James and always endeavors to promote the interests of the students in the affairs of their college life.

### THE INTERRACIAL JUSTICE CLUB

The Interracial Justice Club was organized in 1951 to promote better understanding of the Catholic attitude toward contemporary "racial" problems. It holds weekly discussions on campus and participates in inter-collegiate workshops.

### THE CONFRATERNITY OF CHRISTIAN DOCTRINE

The Confraternity of Christian Doctrine is a student teacher's unit. The purpose of the Confraternity is "to bring Christ to youth and to bring youth to Christ." Holy Cross students conduct religious doctrine classes for gram-

mar school boys and girls and for high school students. Adult discussion classes are also conducted every week as well as classes for student nurses and other professional groups.

#### **RADIO STATION WCHC**

The Campus Radio Station WCHC, which began a formal broadcasting schedule on December 6, 1948, is operated entirely on an extra-curricular basis by student members of the Radio Workshop. WCHC provides a talent outlet and radio experience for hundreds of students in its various departments: station management, programming, production, announcing, radio dramatics, sports, news, writing, music, commercial departments and other functions common to commercial radio stations.

#### **STUDENT CONGRESS**

Students are encouraged to organize and conduct their own activities with as much independence as is consistent with good order and sound educational policy.

The Student Congress is composed of elected representatives and officers of the student body whose purpose is to act as the official representative of the student body; to receive and express student opinion; and to advance the best interests of the student body with the Administration and Faculty, and with other educational institutions and associations.

#### **THE ST. THOMAS MORE SOCIETY**

The St. Thomas More Society is open to all students who are interested in a future career in the Law. Through lectures and discussions by Lawyers, Professors and Deans of Law Schools, students gain both a theoretical and practical knowledge of the profession of law.

#### **OUTING CLUB**

The Outing Club, the largest campus organization, is organized to develop a strong bond of friendship among its members and the student body as a whole, by providing sport and recreational facilities, and promoting social functions.

#### **INTRAMURAL ATHLETICS**

Perhaps the most flourishing and popular extra-curricular activity on the Hill is the Intramural sports program. The great majority of students who are not engaged in varsity competition take some part in intramural sports. Teams are organized from among the Day Students and groups from each corridor of the Residence Halls. Competitive tournaments are played in football, basketball, baseball, etc. The intramural sports provide healthful exercises and plenty of fun; cement friendships and develop many positive

traits of good character and personality.

#### HOLY CROSS ATHLETIC ASSOCIATION

The object of the Athletic Association is to promote the athletic interests of the College, and to discuss and determine matters of the management pertaining to the welfare of collegiate and intercollegiate sports.

Rev. Joseph A. Glavin, S.J.	Faculty Adviser
Eugene F. Flynn, B.A.	Director
Joseph W. McDonough, B.S.	Assistant Director
William C. Crowley, M.A.	Public Relations
Edward N. Anderson, B.S., M.D.	Coach of Football
James M. Harris, B.S.	Assistant Coach of Football
Melvin G. Massucco, B.S.	Assistant Coach of Football
Robert H. Dee, Jr., B.S.	Assistant Coach of Football
Roy H. Leenig	Coach of Basketball
Frank A. Oftring, Jr., B.S.	Assistant Coach of Basketball
John J. Barry	Coach of Baseball
Bartholomew F. Sullivan	Coach of Track; Trainer
Philip E. O'Connell, Ph.B.	Coach of Lacrosse
Charles F. Donnelly	Coach of Golf
Albert D. Riopel, B.A.	Freshman Coach
William C. Samko, B.S., M.S.	Assistant Trainer
Walter M. Mulvihill, B.A., M.D.	Physician
Francis H. Carr, B.A., M.D.	Physician

# Honor Societies

## ALPHA SIGMA NU

*(Holy Cross Chapter)*

Alpha Sigma Nu is a National Honor Society with chapters in various Jesuit Colleges and Universities throughout the United States. It is a society organized to honor students who have distinguished themselves in scholarship, service and loyalty to their College; to promote the interests of their College; to foster all praiseworthy student activity; to unite those alumni who most fully understand and appreciate those ideals in themselves and others.

The following new members were elected to the Holy Cross Chapter on 10 December 1959.

Stanley J. Chojnacki

Peter B. Cinelli

John L. Connelly

Joseph L. Dorsey

John P. Hamill

C. Clark Hodgson

Donald Thomas Hughson

Robert W. Hunter

George B. Imwalle

William J. Madden, Jr.

Thomas A. McCarthy

## DELTA EPSILON SIGMA

*(Alpha Iota Chapter)*

Delta Epsilon Sigma is a National Honor Society for students and graduates of Catholic Colleges and Universities constituted to give recognition and encouragement to high scholarship. The Holy Cross Chapter (Alpha Iota) was inaugurated and the first members initiated on June 9, 1941. Students members are drawn from ten percent of the Senior Class with scholastic honor rating.

The following new members were elected to the Holy Cross Chapter on 10 December 1959.

Philip J. Bergan

John L. Connelly

Neil P. Coughlan

William D. Doino

Joseph L. Dorsey

James J. Galdabini

John M. Greaney

Robert H. Kane

Paul W. Kohnen

Jay R. Massey

John J. Mozdiez

Francis E. Reilly

Edmund D. Taylor

# College Publications

## THE HOLY CROSS PURPLE

*The Holy Cross Purple* is a monthly magazine published by the students of the College. Its aim is to cultivate a high literary taste among the students by exercising them in both critical and creative compositions.

## THE CRUSADER

*The Crusader*, the weekly newspaper of the College, first appeared during the academic year 1924-1925. Its purpose is to secure a firmer bond among the undergraduates, telling the important happenings of the life on the Hill.

## THE PURPLE PATCHER

*The Purple Patcher*, published annually by the Senior Class, is a chronicle of the activities of the Class during its four years' stay on the Hill.

## THE CROSS AND CRUCIBLE

*The Cross and Crucible* is normally published eight times a year by the Department of Chemistry. It provides a medium of scientific expression for chemistry students; it records work of a progressive nature done in the department; it supplements the textbooks with timely articles of general interest to the student of chemistry; and it records the abstracts of departmental seminars and theses.

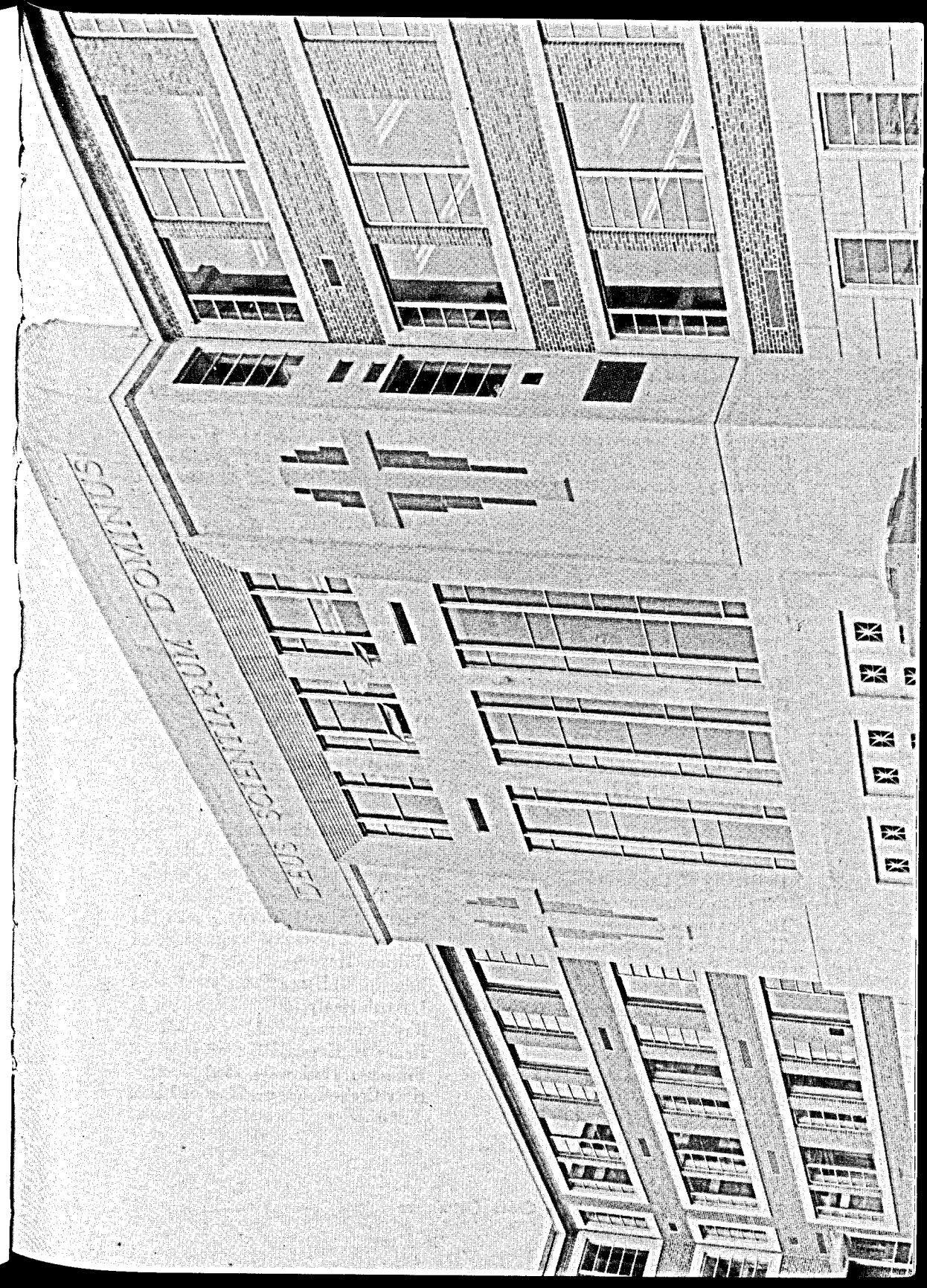
## THE ALUMNUS

*The Alumnus*, published five times yearly by the Holy Cross College Alumni Association and edited by the Executive Alumni Secretary, is twofold in its purpose: first to secure a firmer bond among the graduates; secondly, to serve as a nexus between the Alumni and the College.

## JESUIT EDUCATIONAL ASSOCIATION

### Colleges and Universities

Alabama	Spring Hill College, Spring Hill
California	Loyola University of Los Angeles Santa Clara University, Santa Clara University of San Francisco
Colorado	Regis College, Denver
Connecticut	Fairfield University, Fairfield
District of Columbia	Georgetown University, Washington
Illinois	Loyola University, Chicago
Louisiana	Loyola University, New Orleans
Maryland	Loyola College, Baltimore
Massachusetts	Boston College, Chestnut Hill College of the Holy Cross, Worcester
Michigan	University of Detroit, Detroit
Missouri	Rockhurst College, Kansas City St. Louis University, St. Louis
Nebraska	The Creighton University, Omaha
New Jersey	St. Peter's College, Jersey City
New York	Canisius College, Buffalo Fordham University, New York City Le Moyne College, Syracuse
Ohio	John Carroll University, Cleveland Xavier University, Cincinnati
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# Appendix

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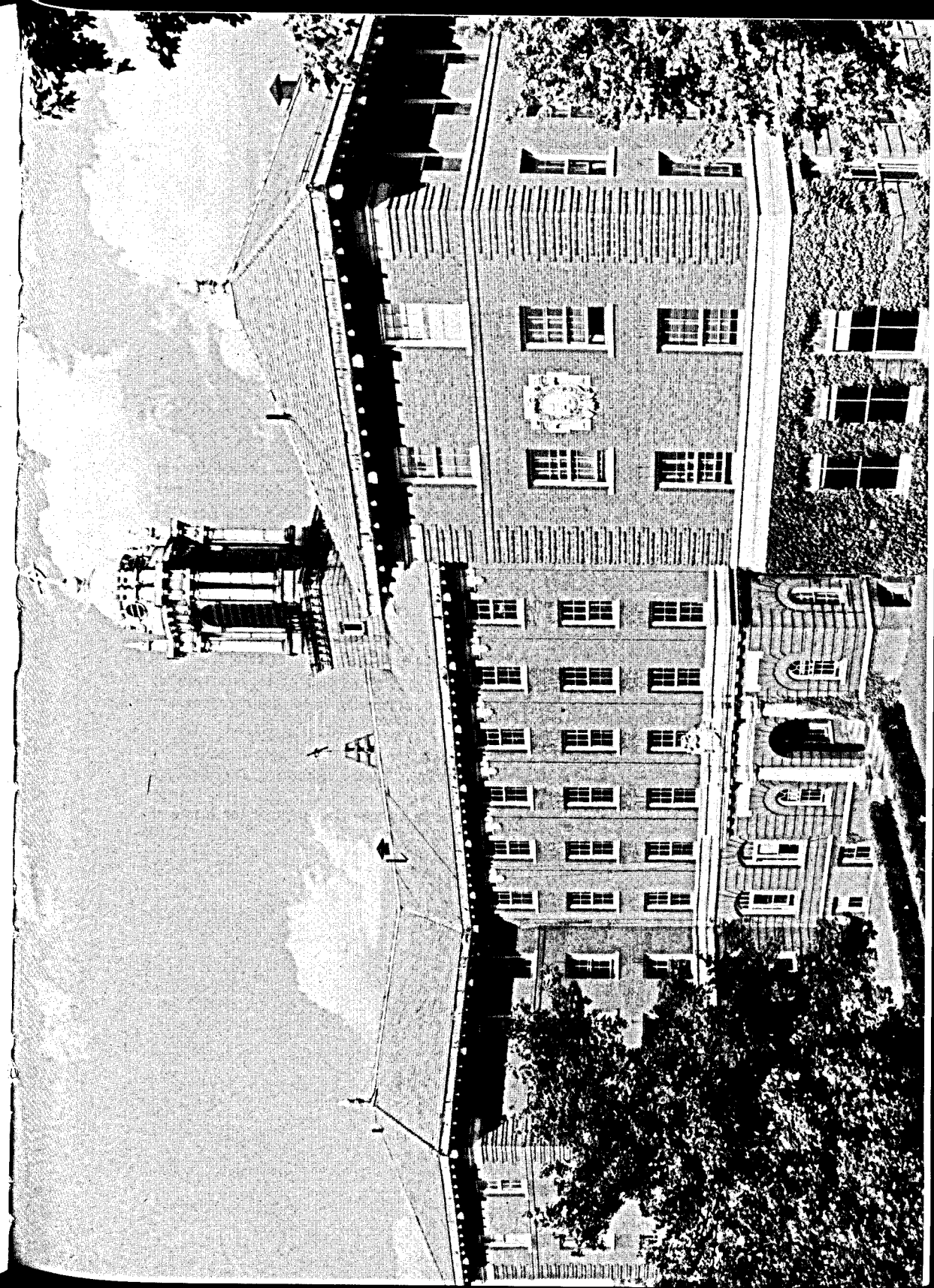
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To the Chairman of the Chemistry Department

Candidates for admission to the Freshman Class should submit their applications promptly upon completion of the first semester of their senior year.

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